



HEAVY EQUIPMENT SAFETY TRAINING COURSE GLOSSARY OF CONSTRUCTION TERMS

A

Acclimatized. Refers to the body's ability to adjust to hot or cold environments if given time. You never get acclimatized to cold as well as you do to heat.

Acute. Refers to health effects that show up right away after exposure to a chemical or other hazard. Acute effects don't last as long as chronic effects. Dizziness from breathing solvent vapors is an example of an acute effect.

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).

Airline respirator. One type of air supplied respirator. It gets breathable air from a clean source outside the work area. A hose connects this air supply to the person's mask.

Allergic reaction. About 10 percent of people will have an abnormal immune response if exposed to certain chemicals. This is called an allergy, and may affect the skin, the respiratory system, or other parts of the body. For example, someone with a skin allergy to a chemical will get rashes from very small amounts of the chemical. Rashes may cover areas of the body that the chemical didn't even touch.

American National Standards Institute (ANSI). Protective clothing and equipment must be safety-approved. ANSI, a national scientific organization in the U.S., develops safety standards for protective clothing, devices, and procedures. OSHA requires compliance with many of these ANSI standards. Most protective clothing and equipment must have a label stating that it meets ANSI requirements.

Anemia. A medical condition in which you don't have enough red blood cells, or don't have enough hemoglobin in your blood. Since hemoglobin in red blood cells carries oxygen throughout your body, anemia means that your whole body is starved of oxygen. You may feel tired or weak. Certain chemicals can cause anemia.

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.

Asbestosis. A lung disease caused by breathing asbestos fibers over a period of time. The fibers eventually scar the lungs and make breathing difficult. Symptoms are similar to asthma.



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Asphalt. A black, sticky material that comes from crude oil—used in paving, roofing, waterproofing, and some glues. Asphalt products may be flammable. They can also produce toxic vapors and hydrogen sulfide gas.

Assured equipment grounding conductor program. A company program to do regular testing of the ground on plugs, outlets, cords, and other electrical equipment. Inspection marks are placed on equipment and records are kept.

Asthma. Breathing difficulty caused by narrowing of the air passages in your respiratory system. Asthma can be caused by spasms or by accumulated fluids. Some chemicals can cause similar symptoms.

B

Bond and ground. A safety precaution you should always take when transferring flammable liquids from one metal container to another. Link the metal containers together electrically to form a conductive path. Also ground the containers. That way, any static electricity will be carried to ground and won't cause a spark.

Bronchitis. Inflammation of the bronchial tubes (air passages that lead from your throat to your lungs). When you inhale a lot of dust, your lungs produce mucus, which helps carry the dust up and out of the body. Too much mucus can cause bronchial irritation and coughing. Bronchitis that doesn't go away is called "chronic" bronchitis.

C

Channelizing devices. The function of channelizing devices is to warn road users of conditions created by work activities in or near the roadway and to guide road users. . . . They are also used to separate motor vehicle traffic from the work space, pavement drop-offs, pedestrian or bicycle paths, or opposing directions of motor vehicle traffic. . . . Channelizing devices include cones, tubular markers, vertical panels, drums, barricades, and temporary raised islands [FHWA 2000 (MUTCD: Section 6F.55)].

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.)

Chock. A wedge or block for blocking the movement of a wheel.

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.

Competent 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, in trenching operations Cal/OSHA requires that a competent person decide what kind of cave-in protection is needed, inspect the operation daily, and correct any hazardous conditions. (Also see *Qualified person*.)

Confined space. A dangerous enclosed work area in which special safety precautions must be taken. It may be underground, in a trench or excavation, or inside a tank or container. Typical safety hazards of



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confined spaces include chemical fumes or vapors, insufficient oxygen, and the chance of being trapped due to limited means of exit.

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

dB. See *Decibel*.

dBA. A decibel measurement made on the “A-scale” of a sound level meter. Using this setting filters out some low frequency (deep) sound, and measures the frequencies which are most likely to damage hearing.

Decibel. A unit of measure used to describe how loud a sound is (sometimes called the “power level” of the sound). Abbreviated as dB. Workers should not be exposed to sound louder than 90 decibels (as an average over 8 hours).

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

Dehydration. Loss of too much water or moisture from the body. It can be caused by work in either hot and cold environments. To prevent dehydration, drink lots of fluids when you work in extreme heat or cold.

Double-insulated. Refers to a electric power tool that doesn’t need to be grounded because it has two separate systems of insulation. The chance of insulation failure is reduced almost to zero. However, dropping or damaging a double-insulated tool can destroy the effectiveness of the insulation.

Dust mask. A mask that filters some types of large dust particles from the air before you breathe it. A dust mask won’t protect you from inhaling very small dust particles or toxic chemicals. For these, you need a respirator.

Dust particles. Small, solid particles of various sizes that can get in the air from cutting, grinding, sawing, drilling, etc. The health risk from breathing dust depends on the specific substance involved and on the size of the particles. In general, for any substance, particles smaller than 10 microns are thought to be more hazardous because they can get deeper into the lungs and cause more damage.

E

Electrolytes. Fluids and salts in your body that you lose when you sweat. Losing them can cause muscle pains and spasms. You can help your body replace electrolytes by drinking a lot of liquids (especially electrolyte solutions) when you work in hot temperatures.



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Emergency Action Plan (EAP). A written plan for every job site with more than ten workers. The plan describes the procedures to follow in any type of major emergency (like a fire or chemical spill). It spells out whom to notify, who's in charge, who should do what, and how to evacuate if necessary. Everyone on the site has a right to see the EAP, and should be trained on it.

Emphysema. A lung disease in which the lung tissue swells and eventually can be destroyed. The lung and heart become less efficient. Emphysema can be caused by tobacco smoke and by long-term exposure to some other chemicals.

Excursion limit. A term used in some OSHA regulations--the maximum exposure that a worker may have to a particular chemical over a short period (usually 30 minutes).

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

Fiberglass. An insulation material made from fibers of glass. Exposure to fiberglass can cause itching, skin disorders, eye irritation, coughing, bronchitis, and possible lung problems.

Fiberglass warts. A type of skin inflammation that can be caused by exposure to fiberglass.

Fibers per cubic centimeter. A unit of measure used to describe the amount of asbestos dust in the air. Indicates how many asbestos fibers are present in a cubic centimeter of air. As an example, a permissible exposure limit for asbestos is two-tenths of a fiber per cubic centimeter of air, averaged per 8-hour shift.

Fibrillation. A fast, irregular heartbeat (sometimes caused by an electric shock).

Filter cartridge. See *Air purifying respirator*.

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.

Flammable. Any substance which is easy to set on fire and able to burn quickly.

Flammable liquid. A liquid with a flash point below 100° Fahrenheit. Since these liquids give off vapors at relatively low temperatures, they may easily catch fire if they are near a flame or spark.

Flash point. The lowest temperature at which vapors evaporating from a liquid can catch fire (when there is a flame or other ignition source present). The lower the flash point, the more fire danger from the liquid. The MSDS for a chemical product will list its flash point.

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.



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Frostbite. A medical condition caused by exposure to cold temperatures. Parts of your body freeze, especially your extremities--fingers, toes, ears, nose tip, and cheeks. Your skin can get numb, or it may feel prickly. It may change color or peel off. You may even lose a body part.

Fumes. Clouds of tiny particles that get into the air. For example, metal fumes (tiny metal particles) may be released into the air during welding.

G

GFI. See *Ground fault circuit interrupter*.

Ground. (*Noun*) An object that makes a direct electrical connection to the earth. (*Verb*) To connect a circuit electrically to a ground, using the earth as a common return.

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.

Gypsum. A colorless mineral powder (calcium sulfate dehydrate). It is used to make plasterboard, wallboard, Portland cement, plaster, and plaster of Paris. Gypsum may contain crystalline silica.

H

Hand-arm vibration syndrome (HAVS). See *Raynaud's Syndrome*.

Hazard Communication. An OSHA regulation that requires employers to warn workers about chemical hazards on the job. Every employer must make sure that containers are labeled, that a Material Safety Data Sheet (MSDS) is available for each chemical product, and that workers get training on chemical hazards and proper precautions. (General Industry Safety Order 5194.)

Hazardous Materials Business Plan. A written plan required on any site with a significant amount of hazardous chemicals. Even a 55 gallon drum of a liquid hazardous chemical is considered a "significant amount." These plans are different in different communities (depending on local agency regulations). However, most cover: Who has authority during a hazardous materials emergency; roles of specific personnel; training for those with such defined roles; notification procedures for emergencies; pre-emergency planning; emergency and personal protective equipment available; evacuation routes, refuge, and safe distances; site security and control; emergency first aid and medical treatment; evaluation of responses to emergencies; and follow-up.

Hazardous Materials (HAZMAT) Team. A specially trained group, working for the company or a government agency, who are responsible for containing and cleaning up leaks and spills of dangerous chemicals.

Hearing loss. Difficulty in hearing, sometimes caused by constant exposure to loud noise on the job. Most hearing loss occurs gradually. At first, it may be temporary, and your hearing returns to normal once you are off the job for a while. Eventually it can become permanent.

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.



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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.

HEPA filter. A High Efficiency Particulate Air filter. These special filters clean the air, removing 99.97% of particles and fibers smaller than 0.3 microns. HEPA filters are found in some respirator cartridges, industrial vacuum cleaners, sanders, and other power tools--especially those used around very hazardous substances like asbestos or lead.

High conspicuity tape. Retroreflective marking material, usually white or an alternating red-white pattern, that is applied to the rear and sides of vehicles to create visual contrast and clearly delineate vehicle size.

High-visibility vest/apparel. Personal protective safety clothing intended to provide conspicuity during both daytime and nighttime usage [ANSI/ISEA 1999].

High voltage. Over 600 volts. (Also see *Volt and Voltage*.)

Hydraulic power tool. A tool that gets its power from water or some other fluid under pressure.

Hydrogen sulfide. A toxic gas produced by hot asphalt and other petroleum products. (It can also be generated when any kind of organic matter decomposes.) When inhaled in low concentrations, hydrogen sulfide can irritate the eyes and respiratory tract. In high concentrations, it can cause lung problems, nausea, vomiting, diarrhea and even death.

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

Immersion foot (trenchfoot). Damage that occurs to the skin in cold environments without actual freezing. It may happen if skin is exposed to cold, together with water or dampness, for too long. Symptoms may include swelling, tingling, itching, loss of skin, or skin ulcers.

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.

Inflammation. Redness and swelling of some part of your body. May be accompanied by burning or itching.

Insufficient oxygen. Refers to an environment where there is less than 19.5% oxygen in the air. It may occur in a trench or other confined space if oxygen has been displaced by various gases and vapors. There isn't enough oxygen to breathe in such an environment, so you must wear an air supplied respirator.



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Internal traffic control plan. A traffic control plan developed to control the flow of construction workers, vehicles, and equipment within the work space.

L

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.

Lifeline. A horizontal line between two fixed anchorages, to which a lanyard may be secured.

Lime. A white, powdery mineral (calcium oxide). It is used in making cement. Lime can cause burns, rashes, and other kinds of skin irritation as well as eye, nose, and throat irritation.

M

Material Safety Data Sheet (MSDS). A form that gives information about a product that contains hazardous chemicals. The MSDS is filled out by the manufacturer, and lists hazardous ingredients, OSHA exposure limits, flammability, health hazards, protective measures, and other information. MSDSs are sent to employers who use the product. Employers must keep MSDSs, and let workers see them and make copies.

Medical surveillance. Refers to some states OSHA requirements that workers exposed to certain toxic substances on the job must be given regular medical exams to make sure their health is not being affected.

Mesothelioma. A rare type of cancer, affecting the lining of the lungs and/or stomach. It is caused by inhaling or ingesting asbestos fibers.

Micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). A unit of measure used to describe the amount of chemical vapors, fumes, or dust in the air. Indicates how many micrograms of a particular chemical are present in a cubic meter of air. (A microgram is one-millionth of a gram.)

Milligrams per cubic meter (mg/m^3). 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.)

Monitoring. The process of using scientific instruments to measure workers' exposure to some hazard on the job (such as toxic chemicals or noise). For example, see *Air* monitoring and Noise monitoring.

MSDS. See *Material Safety Data Sheet*.

Mushrooming. Flattening of the point of a tool due to impact.

N

Naphtha. A yellow or reddish liquid made from petroleum or liquid natural gas. It is used in some solvents, paint thinners, and cleaning fluids. Naphtha is highly flammable. Inhaling its vapors or having skin contact may damage your central nervous system (brain and spinal cord). Naphtha can also remove oil and fat from your skin, causing it to become dry and cracked.



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Negative pressure test. One of two tests you should do every time you put on a respirator. Both tests make sure the fit and seal are OK. For a negative pressure test, place your palms over the cartridges to close off the air, gently inhale to see if the facepiece collapses slightly against your face, and then hold your breath for a few seconds. If the respirator remains collapsed, it passes the test. If it becomes loose, or if air leaks through, it fails. After a failure, try adjusting and tightening the fit of the respirator. Then do the test again. (*Also see Positive pressure test.*)

Nervous system. The system that regulates your internal body functions and responds to the outside environment. It consists of the brain and spinal cord (called the “central nervous system”), together with cranial and peripheral nerves, and ganglia.

Nickel. A silvery, hard metal that is easy to mold into different shapes. Nickel and nickel compounds are used in batteries, electroplating, and for corrosion resistance. Breathing nickel compounds can cause asthma-like symptoms and possibly cancer. Getting nickel compounds on you skin can cause “nickel itch,” an allergic skin reaction.

NIOSH/ MSHA approval number. A number marked on a respirator or filter cartridge, indicating that it is safety-approved. The National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA) are two federal government agencies that approve specific models of respirators and cartridges. The approval number indicates the particular type of use approved (for example, use with a certain toxic substance).

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

OSHA. The Occupational Safety and Health Administration, a US Government agency that makes and enforces workplace safety and health regulations. In some states, including California, OSHA has given this authority to a state agency.

Oxygen-deficient. See *Insufficient oxygen*.

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. Permissible exposure limits for some chemicals are expressed in PPM.

Permissible exposure limit (PEL). A term used in some OSHA regulations-- the maximum exposure that a worker may have to a particular chemical, as an average over an 8-hour shift.

Personal protective equipment (PPE). Various clothing and devices which workers can wear to protect themselves from hazards on the job. Some examples of PPE are gloves, goggles, and respirators.

Pneumatic power tool. A tool that gets its power from compressed air delivered through a hose.

Positive pressure test. One of two tests you should do every time you put on a respirator. Both tests make sure the fit and seal are OK. For a positive pressure test, close off the exhalation valve and exhale



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gently into the respirator. The respirator will expand slightly away from your face. If air leaks out, try adjusting and tightening the fit of the respirator. Then do the test again. (Also see *Negative pressure test*.)

Powder-actuated tool. A tool that gets its power from an explosive charge. It uses the expanding gas from the explosion to drive a fastener into some material.

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 typically 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. (Also see *Competent person*.)

Quartz. See *Crystalline silica*.

R

Radioactive material. Anything that contains radioactive atoms. Radioactive atoms emit energy in the form of alpha, beta, and gamma rays, all of which can damage living tissue.

“Rapid cure” asphalt. An asphalt product that “cures” (sets up) quickly. Compared to slower curing asphalt, the chemicals in a “rapid cure” product evaporate easier. That usually makes the product more dangerous—there are both more toxic vapors and more danger of fire.

Raynaud’s Syndrome. Abnormal narrowing of the blood vessels in your hands and fingers. This condition can result from exposure to cold temperatures and/or power tool vibration. The reduced blood supply first causes tingling or numbness. Eventually you can lose most feeling and control in your hands and fingers. Over a period of time, your skin, nerves, muscle tissue, and bone all can be damaged. Raynaud’s Syndrome is also called “hand-arm vibration syndrome” (HAVS) or “white finger.”

Refractory ceramic mineral fibers. A new type of insulation material, sometimes used instead of fiberglass. Very resistant to high temperatures; made from fired clay. Reproductive problems. Difficulties experienced by a man or woman in producing a healthy child. Reproductive problems may sometimes be caused by exposure to chemicals or radiation.

Resin. A chemical ingredient in some sealants, foams, protective coatings, varnishes, and paints. Most resins are flammable, are not soluble in water, and do not conduct electricity. To find out the hazards of a specific product that contains resins, check the MSDS.

Resistance. An electrical term--the amount of difficulty that electricity has in raveling through a circuit. When the resistance is low, more current will flow. When you’re working near electricity, it’s important to remember that any kind of moisture lowers your resistance (including rain, sweat, or standing in water). With a lower resistance, more current will flow through your body if you get a shock. That can make your injury worse.

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). (Also see *Air purifying respirator*, *Air supplied respirator*, and *Dust mask*.)



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

Roll-over protection structure (ROPS). A structure on a vehicle or heavy equipment that protects the operator from being crushed if the equipment rolls over. It also gives the operator protection from falling objects. The structure forms a “cage” around the operator.

S

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.)

Shoring. A structure that reinforces the sides of a trench or excavation, helping to prevent cave-ins.

Silica. See Crystalline silica.

Soil types. OSHA has a classification system that is used to describe the stability of different soils. Soil type is an important factor in determining the safety of a trench or excavation, and in selecting the right kind of cave-in protection. Soil type is also used to decide whether the ground can support the weight of a structure, scaffold, etc. Type A soil is very stable, and Type C soil is the least stable.

Solvent. A liquid chemical which is capable of dissolving other chemicals. There are many different solvents, with varying hazards. They are found in paints, thinners, adhesives, asphalt mixtures, and many other products. To find out the hazards of a specific product that contains solvents, check the MSDS.

Sound level meter. An instrument that measures the “loudness” of sound. The reading is in decibels (dB). (Also see *Decibel*.)

Spark resistant tool. A special hand tool (usually made of brass, plastic, aluminum, or wood) that won’t produce sparks when you use it. Ordinary iron and steel hand tools can produce sparks. Spark resistant tools are needed for work near highly flammable substances (gas, vapor, or liquid).

SPF. See *Sun protection factor*.

Spoil. Earth and rock dug out of a trench or excavation.

Spotter. Someone who helps a vehicle or heavy equipment operator to back up or maneuver safely. The spotter stands well away from the operation, in easy line-of-sight with the operator, watching for clearances, obstructions, people nearby, etc. Spotters are required in noisy or congested areas, or when equipment has no back-up alarm.

Stokes basket. A type of portable stretcher for moving an injured person.

Styrene. A toxic chemical that can cause nervous system damage. It is used in some asphalt products.



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Sun protection factor (SPF). A number indicating how much protection a sunscreen product (lotion, etc.) gives to your skin. The number is often found on the product label. When you work in bright, direct sunlight, a product with a SPF of at least 15 gives you good protection against harmful ultraviolet rays.

Suspension. A structure inside a hard-hat that keeps a cushion of air between your head and the outer shell of the hat. The cushion of air protects your head from impacts. The suspension in a hard-hat must be adjusted for each user.

T

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

Toeboard. A board attached to the edge of an elevated work platform (for example, on a scaffold). It serves as a barrier to keep tools, materials, and debris from falling onto people below.

Toluene. A clear liquid chemical, used in some solvents. It can irritate your eyes and skin. High short-term exposure to the vapors can cause headache, dizziness, confusion, loss of coordination, sleepiness, nausea, vomiting, and even unconsciousness and death. Long-term exposure can cause liver and kidney damage. Xylene is a closely related solvent with similar effects.

Toxic. Poisonous. Refers to a hazard (such as a chemical or radiation) which is capable of causing health damage.

Traffic control device. A traffic control device is a sign, signal, marking or other device placed on, over, or adjacent to a street or highway, pedestrian facility, or bike way (by authority of a public agency having jurisdiction) to regulate, warn, or guide traffic [FHWA 2000 (MUTCD: p. I-1)].

Transition area. The transition area is that section of highway where road users are redirected out of their normal path [FHWA 2000 (MUTCD: Section 6C.05)].

Trenchfoot. See *Immersion foot*.

U

Ultraviolet (UV) light. A kind of invisible light. Its wavelength is shorter than that of visible light. In the construction industry, UV light may be generated during welding. It can burn the eyes and skin.

Underground Service Alert (USA) or “One-call”. A communication service. Contractors notify USA or one call center when construction may disturb underground utility lines (in known or unknown locations). The utilities make marks on the ground, using a color code, to show the location of electric, telephone, water, sewer, and other utility lines. This information helps the contractor’s crew avoid damaging the lines.

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.



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Ventilation. The flow of air (for example, in the work area). Good airflow reduces vapors and dusts by diluting them and/or carrying them away. “Natural ventilation” means opening windows or doors. “Mechanical ventilation” increases and directs the airflow by using a fan, fume hood, or similar equipment.

Vibration. A very rapid, repeating, back-and-forth or up-and-down motion. Many power tools produce vibration. It may cause damage to your fingers, hands, and arms. (Also see *Raynaud’s Syndrome*.)

Volatility. The likelihood that vapors from a liquid will get in the air. If a liquid is highly volatile, its vapors get in the air more easily. Highly volatile liquids are usually more dangerous for two reasons-- their vapors catch fire more readily, and it’s also more likely that you will breathe the vapors. The MSDS for a chemical product will give you information on its volatility.

Volt. An electrical unit of measure--the amount of force pushing electricity through a circuit. The higher the voltage, the more electric current will flow through the circuit. Voltage results from the difference in electric potential between two points.

Voltage. The number of volts of electricity present. For example, Cal/OSHA considers “high voltage” to be anything over 600 volts, and “low voltage” to be anything less than 600 volts. But even low voltage electricity can kill.

W

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.

White finger. See *Raynaud’s Syndrome*.

Wind chill factor. A way to predict the effect of cold temperatures on the human air temperature and the wind, so both of these are used to figure the wind chill factor. For example: the actual air temperature might be 28° F, with a wind chill of 0° F. Because of the wind, your body will react as if it were exposed to a temperature of 0° F.

Work space. The work space is that portion of the highway closed to road users and set aside for workers, equipment, material, and a shadow vehicle if one is used upstream. Work spaces are usually delineated for road users by channelizing devices, or to exclude vehicles and pedestrians, by temporary barriers. The work space may be stationary or move as the work progresses [FHWA 2000 (MUTCD: Section 6C.06)].

Work zone. The area between the first warning sign and the last traffic control device, as well as non-roadway areas (e.g., shoulders and drainages), and ancillary areas that serve as staging areas, or support areas for the work zone (e.g., temporary batch plants). This definition is broader than the work zone described in the MUTCD, which does not include ancillary areas that serve as staging areas, or support areas (e.g., temporary batch plants) for the work zone.

X

Xylene. See Toluene.