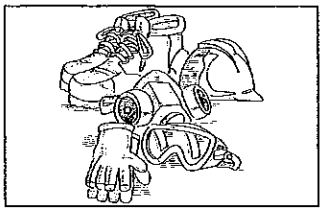


Personal Protective Equipment—An Overview

Overview of Topic

The personal protective equipment (PPE) rules for construction begin in the Code of Federal Regulations at 29 CFR 1926.28. Two important requirements can be found there. They are:

- You, the employer, are responsible for requiring the wearing of appropriate personal protective equipment in all operations where an employee is exposed to hazardous conditions.
- You are responsible for ensuring personal protective equipment is provided and worn when an OSHA rule indicates the need for it to reduce hazards to your employees.

This reference then says: regulations governing the use, selection, and maintenance of personal protective and lifesaving equipment are described under Subpart E of the regulations.

Subpart E—Personal protective/life saving equipment

You are required to provide a hazard-free work environment for your employees. When a hazard cannot be eliminated by engineering or administrative methods, protective equipment, including personal protective equipment, must be provided, used, and maintained in a sanitary and reliable condition. Other requirements of the PPE and life saving rule are:

- If equipment is employee-owned, you are responsible to assure its adequacy, including proper maintenance, and sanitation.
- All personal protective equipment must be of a safe design and construction for the work to be performed.

The PPE rule covers occupational foot, head, hearing, eye and face, and respiratory protection. It also covers safety belts, lifelines, lanyards, safety nets, and working over or near water.

Each of these topics has its own Toolbox Talk.

Respiratory protection

In 1998, OSHA removed respirator requirements from the construction regulations. You now must follow the general industry rules at §1910.134. See the respiratory protector Toolbox Talk for details.

Employee Training

The OSHA rules require the following training for employees using personal protective equipment:

- Employees must: (1) be trained to recognize and avoid unsafe conditions at their worksites, and (2) understand the regulations applicable to their work environment, to control or eliminate the hazards (1926.21(b)(2)).

Training Tips

See each individual Toolbox Talk for PPE training on individual topics. Use this toolbox time to give a brief overview of your PPE program.

Where To Go For More Information

Construction regulatory text: §1926.28—Personal protective equipment

Construction regulatory text: §1926, Subpart E—Personal protective and life saving equipment

General industry regulatory text: §1910.134—Respiratory protection

KELLER'S CONSTRUCTION TOOLBOX TALKS

Personal Protective Equipment—An Overview

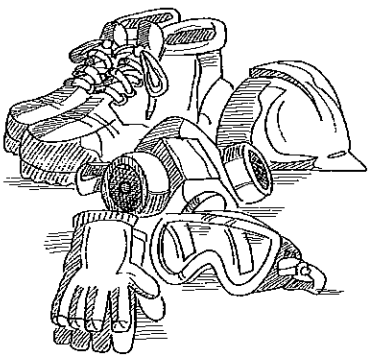
The personal protective equipment (PPE) rules for construction begin in the Code of Federal Regulations at 29 CFR 1926.28. Two important requirements can be found there. They are:

- Your employer is responsible for requiring you to wear the appropriate personal protective equipment in all jobs where you are exposed to hazardous conditions.
- When an OSHA rule says you need PPE, your employer is responsible for ensuring the appropriate gear is provided and worn.

This reference then says: regulations governing the use, selection, and maintenance of personal protective and lifesaving equipment are described under Subpart E of the regulations.

Subpart E-Personal protective/life saving equipment

Your employer is required to provide you a hazard-free work environment. When a hazard cannot be eliminated by engineering or administrative methods, protective equipment, including PPE, must be provided, used, and maintained in a sanitary and reliable condition.



Other requirements of the PPE and life saving rule are:

- If equipment is employee-owned, your employer must assure its adequacy, including proper maintenance, and sanitation.
- All PPE must be of a safe design and construction for the work to be performed.

The PPE rule covers occupational foot, head, hearing, eye and face, and respiratory protection. It also covers safety belts, lifelines, lanyards, safety nets, and working over/near water.

Each of these topics has its own Toolbox Talk.

Respiratory protection

In 1998, OSHA removed the construction respirator requirements from the regulations. You now must follow the general industry rules at §1910.134. See the respiratory protector Toolbox Talk for details.

Personal protective equipment is important at your jobsite. Sometimes it can mean the difference between going home uninjured at the end of the day or a tragedy. Your boss is responsible to: (1) get you the proper equipment for the job, (2) ensure you wear it, and (3) set up a PPE program. You must take the responsibility to: (1) take care of your PPE, and (2) wear it at all times when required.

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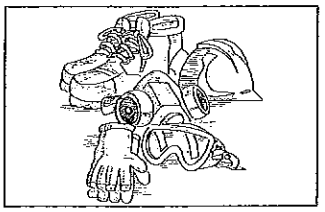


Personal Protective Equipment—An Overview Sign-Off Sheet

This sign-off sheet documents the names of employees who attended this training session on Personal Protective Equipment—An Overview at _____.
(company name)

The session covered:

- Introduction to personal protective and lifesaving equipment.
- Respiratory protection requirements.
- Written respirator program.

The space below is for employees to "sign-off" that they were in attendance.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

PPE—Eye Protection

Overview Of Topic

Eye protection is one of the easiest and least expensive OSHA requirements, yet each year thousands of workers injure their eyes or lose their sight, not because they didn't have the proper eye protection, but because they chose not to wear it. For this reason, and because the chances of being hit by a flying chip of metal or wood is great in construction, training in this area is crucial.

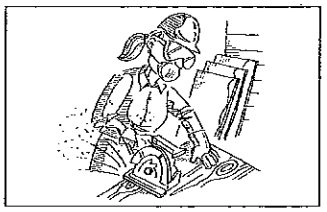
The main hazards include the following:

- Injurious gases, vapors, and liquids.
- Dusts or powders, fumes, and mists.
- Flying objects or particles.
- Splashing metals.
- Thermal and radiation hazards (heat, glare, and ultraviolet and infrared rays).
- Lasers.
- Electrical hazards.

You will find construction requirements for eye protection in 29 CFR 1926.102. When machines or operations present potential eye injury from physical, chemical, or radiation elements, your company must select, provide, maintain, and require affected employees to use appropriate eye protection that is adequate, reasonably comfortable, snug but does not interfere with the movement of the wearer, durable, and capable of being disinfected and cleaned.

Employees who wear prescription lenses must wear:

- Spectacles whose protective lenses provide optical correction,
- goggles that can be worn over corrective spectacles without disturbing the adjustment of the spectacles, or
- goggles that incorporate corrective lenses mounted behind the protective lenses.



PPE—Eye Protection

For protection against radiant energy, you must select the appropriate shade number for the filter lenses or plates used in welding according to Table E-2 in 29 CFR 1926.102.

Also in that section, OSHA provides a very useful table, "Table E-1—Table—Eye and Face Protector Selection Guide," which lists many possible operations that require eye protection, the hazards the operation presents and the recommended protectors.

Employee Training

Train employees on:

- The types of eye protection available.
- During what work they should wear which types of eye protection.
- How to care for and maintain eye protection.
- Where they can obtain eye protection onsite.

OSHA state-plan-states: Certain states have more stringent regulations than Federal OSHA. If you operate in a state-plan-state, check with your local OSHA office to determine if there are regulations that go above and beyond Federal OSHA.

Training Tips

During eye protection training:

- Cover the location and operation of eyewash stations. Due to the temporary and portable nature of construction worksites, you probably will have a variety of portable eyewash stations. Demonstrate their use.
- Show types of eye protection required and available for use at your company.
- Discuss and demonstrate company procedures for maintaining, inspecting, and replacing eye protection. Tell workers to watch for dirty, pitted, cracked, scratched, or broken lenses which can lead to reduced vision and breakage.

Where To Go For More Information

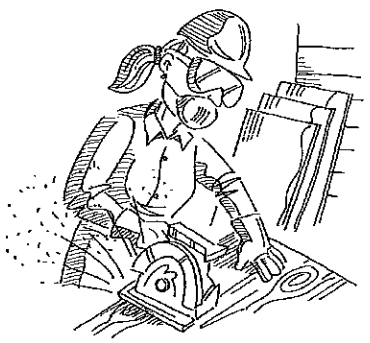
OSHA regulations 29 CFR 1926.102

KELLER'S CONSTRUCTION TOOLBOX TALKS

PPE—Eye Protection

It could take only one second and one piece of metal, tiny scrap of wood, or small drop of chemical, and suddenly your sight could be gone. Because of workplace hazards, OSHA requires construction workers to use appropriate eye protection to guard against injury in situations where it is reasonable to assume an injury could occur. The following chart lists potential eye hazards.

POTENTIAL HAZARDS & THEIR SOURCES
Impact: Operations that create flying objects or particles — caulking, chiseling, grinding, hammering, and metal working. **Dust, Powder, Fume, & Mist:** Scaling, light grinding, spot welding, and woodworking. **Gas, vapor, liquid or metal splash:** Babbitting, casting of hot metal, dripping in hot metal baths, and working with acids/caustics and vapors. **Electrical:** Arcing and sparks. **Thermal & Radiation:** Welding, metal cutting, and working with ultraviolet light and infrared radiation. **Laser:** Exposure to laser beams. **Eye Discomfort & Fatigue:** Glare from the sun.



Eye injuries ARE preventable if you use proper eye protection including:

- **Machine guarding:** Because machinery and equipment can be a major source of impact and splash hazards, many come with guards/screens/shields.
- **Lighting and ventilation:** Use proper lighting in order to see your work clearly and reduce glare and eye strain. Use proper ventilation in order to carry away flying debris, fumes, vapors, and dust.
- **Eye protection devices:** Employers must assess hazards and provide necessary eye protection devices. The chosen device must meet ANSI standard Z87.1-1968. The manufacturer identification must be distinctly marked on the device. All eye protection devices must provide adequate protection, reasonable comfort, a snug fit which does not interfere with the movement of the wearer, durability, and the capability of being disinfected and cleaned. Common types of eye protection in use on construction sites include safety glasses and goggles, face shields, and welding helmets.

Some eye protection advice includes the following:

- Do not use ordinary prescription glasses as a substitute for eye protection devices. They aren't strong enough to protect you from impact.
- Be sure your eye protectors fit comfortably snug.
- Inspect and clean eye protectors frequently.
- Know where emergency eyewash stations are located and how they work.
- For chemical injuries flush eyes with water for at least 15 minutes and seek medical attention. For cuts to the eye, tightly bandage eye and seek medical attention.

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PPE—Eye Protection Sign-Off Sheet

This sign-off sheet documents the employees who have taken part in a training session on PPE—Eye Protection at _____.
(company name)

The session covered the following:

- When eye protection is necessary and potential hazards to the eye.
- What eye protection is necessary.
- The limitations of the eye protection.
- Advice on eye protection, including eyewash stations.

The space below is for each individual who has been trained on this topic to sign his/her names.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

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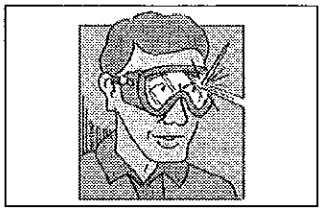

PPE—Eye Protection Checklist

Overview Of Topic

Construction work can be dangerous to your employee's vision. Eye injuries are very common, especially for trade workers like plumbers, electricians and pipefitters. Why these workers? Because they do a lot of work overhead, looking up. All sorts of things fall into their eyes, unless they're wearing eye protection.

All construction workers need to be careful about eye injuries; they can occur anytime, anywhere on the job.

You are more apt to get an eye injury if your work requires you to:

- Work overhead
- Weld or solder
- Do wiring
- Drill holes
- Cut pipes
- Remove pipes
- Grind
- Work on live circuits
- Work with pressurized gases
- Operate power tools

Eye protection

Always require employees to wear safety glasses (with side shields). When performing the tasks listed above it's best to wear goggles or face shields.

Remember, when wearing a face shield workers still need to wear safety glasses underneath.

Determine your eye protection needs

You're employees can use this **checklist** to make sure they're ready for the workday:

- Do you have your safety glasses?
- Are there any tasks that you'll need goggles or face shields for?

- Are you going to be doing any welding? (Do you have your welding helmet?)
- Do you know where the emergency eyewash station is?
- Do you know the number to call to get medical attention?
- Do you know where the first aid kit is located?

Employee Training

Train employees on:

- The types of eye protection available.
- The types of eye protection needed for different types of tasks.
- How to care for and maintain eye protection.
- Where they can obtain eye protection onsite.

OSHA state-plan-states: Certain states have more stringent regulations than Federal OSHA. If you operate in a state-plan-state, check with your local OSHA office to determine if there are regulations that go above and beyond Federal OSHA.

Training Tips

Cover the locations and operation of eyewash stations. Demonstrate their use if possible. Show types of eye protection required and available for use at your company. Discuss and demonstrate company procedures for maintaining, inspecting, and replacing eye protection.

Where To Go For More Information

29 CFR 1926.102—Eye and face protection

KELLER'S CONSTRUCTION TOOLBOX TALKS

Personal Protective Equipment—Eye Protection Checklist

Construction work can be dangerous to your vision. Eye injuries are very common, especially for trade workers like plumbers, electricians and pipefitters. Why these workers? Because they do a lot of work overhead, looking up. All sorts of things fall into their eyes, unless they're wearing eye protection.

All construction workers need to be careful about eye injuries; they can occur anytime, anywhere on the job. You are more apt to get an eye injury if your work requires you to:

- Work overhead
- Weld or solder
- Do wiring
- Drill holes
- Cut pipes
- Remove pipes
- Grind
- Work on live circuits
- Work with pressurized gases
- Operate power tools

Eye protection

Always wear your safety glasses (with side shields). When performing the tasks listed above it's best to wear goggles or face shields. Remember, when wearing a face shield you still need to wear your safety glasses underneath.

Determine your eye protection needs

Use this **checklist** to make sure you're ready for the workday:

- Do you have your safety glasses?
- Are there any tasks that you'll need goggles or face shields for?
- Are you going to be doing any welding? (Do you have your welding helmet?)
- Do you know where the emergency eyewash station is?
- Do you know the number to call to get medical attention?
- Do you know where the first aid kit is located?

Talk to your supervisor if you have questions on eye protection. That way you'll be able to see the other hazards that can cause you harm.

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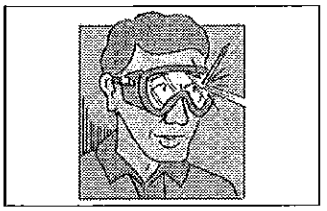

PPE—Eye Protection Checklist Sign-Off Sheet

This sign-off sheet documents the employees at this company, _____, who have taken part in a training session on Personal Protective Equipment—Eye Protection Checklist. The session covered:

- Which trades are at greater risk for eye injuries.
- The tasks that are hazardous to your eyes.
- How to determine your eye protection needs.

The space below is for employees to "sign-off" that they were in attendance.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

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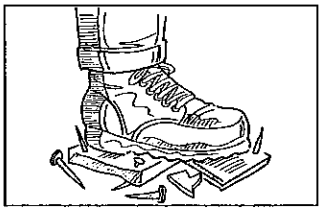

PPE—Foot Protection

Overview Of Topic

There are over 150,000 foot and toe injuries per year in the working world. Because the foot doesn't have thick muscle and fat to protect the bones in the feet, feet are vulnerable to many types of injuries. With so many foot and toe injuries each year OSHA developed regulations that specify foot protection to keep construction workers' feet safe. These regulations are located in 29 CFR 1926.95 and .96.

The main foot hazards include:

- *Compression*—foot or toe is squeezed or rolled over.
- *Puncture*—A sharp object like a nail breaks through the sole.
- *Slipping*—Contact with surface hazards like oil, water, or chemicals that cause falls.
- *Wetness*—Hazard may be slipping, discomfort, and fungal infections.
- *Chemicals*—corrode ordinary safety shoes and can harm your feet.
- *Extreme heat and cold*—Insulation or ventilation is required.
- *Soreness*—Worker stands/walks on hard pavement or floors for long periods of time causing pain and discomfort. Soreness could also be caused by wearing improperly-fitted shoes.

If machines or operations present the potential for foot injury, your company must provide foot protection which is of safe design and construction for the work to be performed. Once foot protection is provided, employers must ensure that it is used and maintained.

OSHA requires that safety toe shoes, when used for construction workers, meet the requirements of the American National Standards Institute (ANSI) standard on protective footwear (ANSI Z41.1-1991).

If you actually take a look at the ANSI standard, you will see that safety shoes must be designed to protect your feet and toes in areas most likely to be injured:

- **Safety toe**—Must protect against falling objects or pressing weight.
- **Cushion**—Between toe cap and foot should offer comfort and insulation.
- **Steel sole**—Must protect wearer from puncture wounds. Soles can be made from a variety of materials depending on the potential hazards.

Select foot protection based on the hazards presented to the employee. Foot protection comes in these types in a wide variety of shoes, boots, and guards approved by ANSI.

Employee Training

An effective foot protection training program might cover:

- When and what foot protection is necessary.
- What foot protection is necessary.
- How to properly don, doff, adjust, and wear foot protection.
- The limitations of the foot protection.
- The proper care, maintenance, useful life, and disposal of the foot protection.

Training Tips

During foot protection training, you could present your safety shoe purchase program, if you sponsor or subsidize one, and review foot hazards most commonly found at your jobsites. Tell tales of past injuries, present the kinds of foot protection required at your company, and go over proper usage.

Where To Go For More Information

OSHA regulations 29 CFR 1926.95 and CFR 1910.132 and .136.

KELLER'S CONSTRUCTION TOOLBOX TALKS

PPE—Foot Protection

Have you ever had an elephant step on your foot? Probably not. While most construction workers don't have to handle elephants, many have to contend with heavy objects which can have about as much disabling power as stomping elephants. Heavy objects falling on toes is just one of the many foot hazards faced by workers today.

Foot and toe injuries are well over 100,000 per year in the working world. Without thick muscle and fat to protect the 26 bones of each foot, your feet are very vulnerable to many types of injuries.With so many foot and toe injuries each year, the Occupational Safety and Health Administration (OSHA) developed regulations that specify foot protection to keep your feet safe at work. These regulations are located in 29 CFR 1926.95 and .96.

Potential hazards

Foot Hazards		
Puncture	Wetness	Soreness
Compression	Chemicals	Extreme heat
Electricity	Slipping	Extreme cold

Foot protection

If there's a foot hazard, you need foot protection. You can choose from a wide variety of ANSI-approved safety shoes, safety boots, puncture-resistant footwear, metatarsal guards, conductive shoes, electrical hazards shoes, static dissipative shoes, and add-on guards that go over the tops of regular shoes.

Selection process

Though your employer may select safety shoes for you, there are a few things you can check to be sure they are safe and comfortable:

- Do the shoes fit both feet comfortably?
- Is there room between the tip of your longest toe and the shoe?
- Can you wiggle your toes freely?
- Does the shoe have flexible upper surfaces and smooth areas inside so that the shoe is easier to slip on?
- Does the shoe have built-in cushioning?
- Does the shoe come in leather so that your shoes breathe?
- Will the shoe adequately protect your feet from the hazards of your job? Look for things like safety toes; steel insoles; cushions between the toe caps and the feet; appropriate sole material; aluminum, steel, or plastic instep protection; insulation; water resistance; and ankle protection.
- Does the shoe meet ANSI Z41.1-1991 standards for foot protection?

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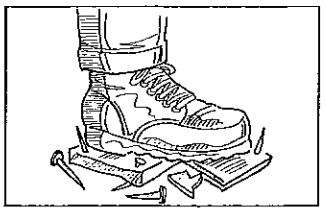

PPE—Foot Protection Sign-Off Sheet

This sign-off sheet documents the employees who have taken part in a training session on PPE—Foot Protection at _____.
(company name)

The session covered the following:

- When foot protection is necessary and potential hazards to feet.
- How to evaluate and select foot protection.

The space below is for each individual who has been trained on this topic to sign his/her names.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

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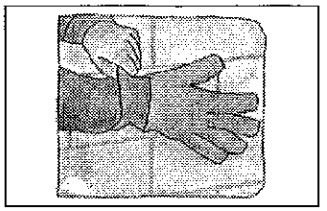


PPE—Glove Selection

Overview Of Topic

Hand protection is extremely important in construction work, which can be very hard on and dangerous to the hands. Although there are no specific safety requirements for hand protection in the construction rules, you still must ensure that employees keep their hands safe from injury on the construction jobsite.

Glove selection

Employers must select, and require employees to use, appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

Use the following information to help select a glove that will fit correctly and provide the protection you need:

Features

Determine the types of features that are needed:

- Palm grip type (rough, smooth);
- Sewn or molded;
- Curved or straight finger design;
- Insulated (for protection against heat or cold);
- Wrist, elbow, or shoulder length;
- Cuff or no cuff;
- Coating (for chemical resistance);
- Cut resistant (usually made of Kevlar fabric).

Length

Determine the length of the glove by measuring how far the employee will need to immerse their arm into a solution. Take into account any splash protection that is needed.

Size

Choose the proper size. Gloves that are too tight can cause fatigue and numbness. Ones too loose can fall off or get caught in equip-

ment. Determine the proper size by using a cloth measuring tape to measure around the circumference of the employee's hand. Measure around the widest point of the palm. If it's 8 inches then you need a size 8 glove. (Remember actual sizes vary by manufacturer and even by different styles from the same manufacturer.)

Disposable or reusable

Select either a disposable or reusable glove. Some tasks require a disposable glove.

Employee Training

Train employees on the various types of gloves available on the jobsite and their various uses. In addition, instruct employees on when they must use gloves to protect themselves from injury, and enforce use of it through disciplinary action if necessary. Protect your construction employees from the all-too-common threat of hand injuries.

OSHA state-plan-states: Certain states have more stringent regulations than Federal OSHA. If you operate in a state-plan-state, check with your local OSHA office to determine if there are regulations that go above and beyond Federal OSHA.

Training Tips

The best way to train employees on the use of most types of PPE, including hand protection, is to demonstrate its use in an informal session before the start of the work day. Gather together one sample of each type of glove in use on your worksite and do a mini-demonstration. You need not show every worker every type of hand protection, but make sure you show each worker the type to be used for the work being performed by that person.

Where To Go For More Information

29 CFR 1910.138—Hand protection

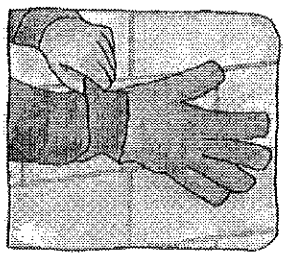
29 CFR 1926.95—Criteria for personal protective equipment

KELLER'S CONSTRUCTION TOOLBOX TALKS

Personal Protective Equipment—Glove Selection

Everyone gets a cut now and then while working around the house. However, because of the types of hazards construction workers are exposed to on the jobsite, hand injuries sustained at work can be very serious.

Employers must select, and require employees to use, appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.



Lots of choices

There are many standard and specialty gloves made by hundreds of glove manufacturers. Your employer must perform a hazard analysis to determine exactly what types of gloves are needed.

Use the following information to help select a glove that will fit correctly and provide the protection you need:

Features

Determine the types of features that are needed:

- Palm grip type (rough, smooth);
- Sewn or molded;
- Curved or straight finger design;
- Insulated (for protection against heat or cold);
- Wrist, elbow, or shoulder length;
- Cuff or no cuff;
- Coating (for chemical resistance);
- Cut resistant (usually made of Kevlar fabric).

Length

Determine the length of the glove by measuring how far the employee will need to immerse their arm into a solution. Take into account any splash protection that is needed.

Size

Choose the proper size. Gloves that are too tight can cause fatigue and numbness. Ones too loose can fall off or get caught in equipment. Determine the proper size by using a cloth measuring tape to measure around the circumference of your hand. Measure around the widest point of the palm. If it's 8 inches then you need a size 8 glove. (Remember actual sizes vary by manufacturer and even by different styles from the same manufacturer.)

Disposable or reusable

Select either a disposable or reusable glove. Some tasks require a disposable glove.

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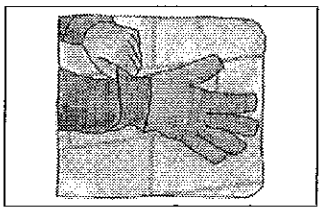

PPE—Glove Selection Sign-Off Sheet

This sign-off sheet documents the employees at this company, _____, who have taken part in a training session on Personal Protective Equipment—Glove Selection. The session covered:

- The employer's responsibility for hazard analysis.
- The employer's responsibility for glove selection.
- The features of different gloves.

The space below is for employees to "sign-off" that they were in attendance.

Date of Training: _____ **Job Location:** _____

Employee Signature	Print Name Here

Supervisor's Signature

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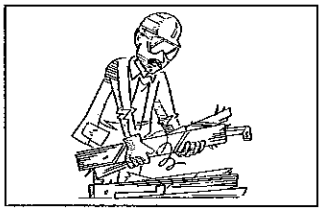


PPE — Hand Protection

Overview of Topic

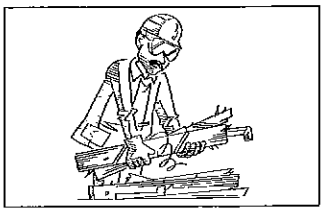
Hand protection is extremely important in construction work, which can be very hard on and dangerous to the hands. Although there are no specific safety requirements for hand protection in the construction rules, you still must ensure that employees keep their hands safe from injury on the construction jobsite.

Bureau of Labor Statistics data indicate that 275,500 workers suffered injuries to hands and fingers in 1994. That means about 12 percent of all work-related injuries are to hands or fingers. That's a significant percentage. Your company should select and require employees to use hand protection when they are exposed to hazards such as skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, or harmful temperature extremes.

Three Main Hazards

During construction work, hands are exposed to three basic kinds of hazards:

- *Mechanical hazards*—These are present wherever machinery like drills, sanders, saws, or other machinery is used. Injuries resulting from machinery use might include cuts, punctures, abrasions, or crushing.
- *Environmental hazard*—Factors like extreme heat or cold (common from some types of work or during certain times of the year), electricity, and materials handling have the potential to injure your hands.
- *Irritating substances*—Skin conditions such as dermatitis can be caused by contact with chemicals and biological agents (bacteria, fungi, and viruses). Chemicals and toxic substances can also enter the blood stream through abrasions or cuts.



PPE — Hand Protection

The First Defense

The first defense against hand injuries are engineering controls designed into equipment during manufacture or used to alter the work environment to make it safe and hazard free. Do not allow alteration or removal of machine guards on equipment used in construction to protect hands and fingers from moving parts. Design work areas on the job site and job tasks to incorporate proper positions for tools, hands, and work objects.

Types of Protective Equipment

Personal protective equipment (PPE) can help reduce the frequency and severity of hand and finger injury. Although fingers are harder to protect, they can be shielded from many common injuries. Personal protection is available in the form of gloves, mitts, finger cots, thimbles, hand pads, sleeves and hand lotions or barrier creams.

Employee Training

Train employees on the various types of hand protection available on the job-site and their various uses. In addition, instruct employees on when they must use such PPE to protect themselves from injury, and enforce use of it through disciplinary action if necessary. Once an employee's finger is gone, it cannot be replaced. Protect your construction employees from the all-too-common threat of hand injuries.

Training Tips

The best way to train employees on the use of most types of PPE, including hand protection, is to demonstrate its use in an informal session before the start of the work day. Gather together one sample of each type of glove, lotion, cream, sleeve, or other type of hand protection in use on your worksite and do a mini-demonstration. You need not show every worker every type of hand protection, but make sure you show each worker the type to be used for the work being performed by that person.

Where To Go For More Information

OSHA regulation 29 CFR 1910.138

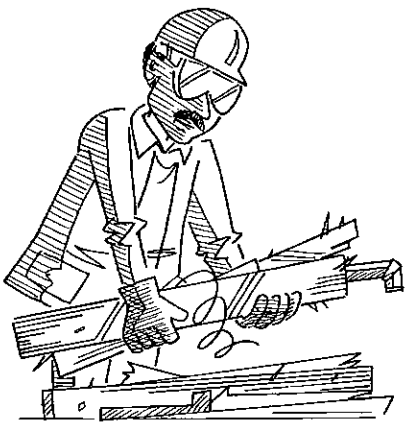
KELLER'S CONSTRUCTION TOOLBOX TALKS

PPE—Hand Protection

How would you answer the question, "What is the most used tool in construction?" Some people would name a commonly used hand tool like a hammer or screwdriver. Others might respond with a list of larger equipment such as lathes or power tools. But the correct answer is deceptively simple. The most used tool on almost any job site is the human hand.

Think of almost any task at your worksite, from sweeping up construction debris to skillfully using a finishing trowel. Your hands and fingers are the tools you use every day. Try writing without using your thumb. Try holding a hammer with only two fingers. It is almost impossible to perform many tasks without the use of your hands.

Hand protection is important because our hands are exposed to so many hazards in the workplace. The company you work for will have for you and require you to use hand protection when you are exposed to hazards such as skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical bums, or harmful temperature extremes. OSHA requires this protection.



Gloves

Gloves are perhaps the most commonly used type of PPE. They provide protection to fingers, hands, and sometimes wrists and forearms. Ideally, gloves should be designed to protect against specific hazards of a job being performed. Types range from common canvas work gloves to highly specialized gloves used in specific industries.

Good examples of job-rated hand protection are the items designed for those who work with electricity-special rubber gloves and lineworkers' rubber insulating sleeves. The gloves are made of natural or synthetic rubber and are color coded to correspond with their level of voltage protection.

Rubber, vinyl, or neoprene gloves are also used when handling caustic chemicals like acids, cleansers, or petroleum products. Leather gloves or leather reinforced with metal stitching are useful for handling rough or abrasive materials. Metal mesh gloves are worn by workers in the meat packing industry who work with sham knives and saws. Many gloves are rated as being safe for use with certain kinds of chemicals. If you are allowed to select your own PPE, make sure you select the proper type of glove for the work you're doing that day.

In addition, wear only gloves that fit your hand. Proper fit is important. Gloves that are too small can tire your hands and gloves that are too large are clumsy to work with. Gloves should be worn with great caution near moving equipment or machinery parts. The glove could get caught and pull your fingers or hand into the machinery. Gloves should be given proper care and cleaning. They should be inspected regularly for change in shape, hardening, stretching, or rips.

Other types of hand protection you may use on the job site include barrier creams, mitts, finger cots, hand pads, sleeves or forearm cuffs, and thimbles. If you are called upon to use any of these, or if you need gloves or aren't sure which type of glove to use, ask your foreman.

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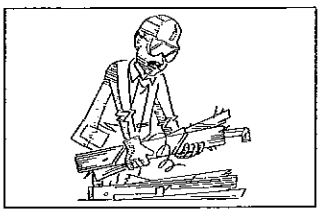

PPE—Hand Protection Sign-Off Sheet

This sign-off sheet documents the employees who have taken part in a training session on PPE—Hand Protection at _____.
(company name)

The session covered the following:

- Types of personal protective equipment or other personal protective items that can serve as hand protection (including gloves and any other types of hand protection used by these employees).
- When and how to use these types of hand protection on the job.
- A demonstration of the use of the hand protection.

The space below is for each individual who has been trained on this topic to sign his/her names.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

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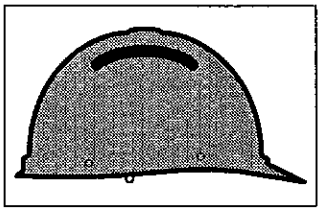


PPE — Head Protection

Overview Of Topic

Thousands of head injuries occur each year in construction. Head injuries are caused by falling or flying objects, bumping the head against a fixed object, or electrical shock and burns.

Controlling the hazards first

As with any personal protective equipment, first attempt to eliminate or control hazards. This can be done with administrative controls. For example, have the worker who is up on a scaffold (and who could potentially drop tools below) work at a different time than those who typically work below. Engineering controls that change the design of a worksite, such as placing work areas far enough from electrical lines that there is no exposure, also work well.

Selecting head protection

If head hazards remain after they have been assessed and controlled, provide employees with appropriate head protection for the hazards identified. Having all employees wear hard hats at all times while on-site is not a bad idea, since most construction sites have some head hazards no matter what precautions are taken.

With a hard outer shell and a suspension system inside, the basic hard hat is designed to do two things: resist penetration and absorb the shock of a blow. However, not all hard hats are the same. Depending on the class and type, of the hard hat, some hard hats can do much more. The American National Standards Institute (ANSI) standard Z89.1-1969 places hard hats into three classes A, B, & C. ANSI also specifies two types of hard hats: 1 (full brim) and 2 (no brim).

According to §1926.100, head protection intended for protecting employees against head hazards must meet ANSI standards: Z89.1-1969 (for impact hazards and penetration of falling and flying objects) and Z89.2-1971 (for high voltage electrical shock and burn hazards).

In 1997, ANSI released ANSI Z89.1-1997. This standard revised the types of classes for industrial head protection. When purchasing new hard hats, you may run across this new designation. There are two types of helmets based on impact capabilities:

Type	Helmets intended to reduce the force of impact resulting from a blow
1	Only to the top of the head
2	Which may be received off center or to the top of the head

ANSI also designated three classes based on electrical protection:

Class	Helmet description
G (General)	Intended to reduce the danger of contact exposure to low voltage conductors. Test samples are proof-tested at **2,200 volts** (phase to ground).*
E (Electrical)	Intended to reduce the danger of exposure to high voltage conductors. Test samples are proof-tested at **20,000 volts** (phase to ground).*
C (Conductive)	Not intended to provide protection against contact with electrical conductors.

*This voltage is not intended as an indication of the voltage at which the helmet protects the wearer.

Though the new designations have been introduced by ANSI Z89.1-1997, OSHA only requires you to follow the old ANSI Z89.1-1969. Whatever system you use, be sure you select the hard hat that gives adequate protection.

Employee Training

An effective head protection training program should involve training employees so they know:

- When head protection is necessary. Share company policies or show workers hard hat designated areas which may be indicated by signs.
- What head protection is necessary.
- How to properly don, doff, adjust, and wear head protection.
- The limitations of the head protection.
- The proper care, maintenance, useful life, and disposal of head protection.

Training Tips

During head protection safety training, you may want to review the head hazards most commonly found at your jobsites and present the kinds of head protection required at your company.

Where To Go For More Information

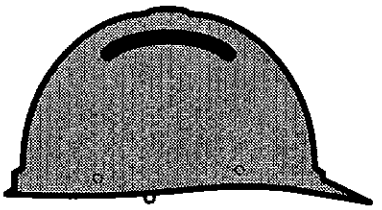
29 CFR 1926.100—Head protection.

29 CFR 1926.95 —Criteria for personal protective equipment.

KELLER'S CONSTRUCTION TOOLBOX TALKS

PPE—Head Protection

Thousands of head injuries occur each year in the construction industry. Injuries range from major concussions to death, minor abrasions to trauma, even electrocution. Most of these injuries occurred when workers were not wearing head protection. Hard hats lessen these kinds of injuries because they are designed with a hard outer shell and a suspension system inside. In this way, depending on the kind of hard hat, hard hats protect your head from some or all of the following hazards: impact, falling and flying objects, electrical shock and burns, and hair entanglement.



Hard hats are a very common and sensible requirement on construction sites. Always wear yours when required. Look for hard hats that have water-resistant and slow-burning materials. Purchase a hard hat only if it identifies the manufacturer's name and the ANSI designation Z89.1. Do not purchase a metal hard hat if it is an electrical conductor and doesn't meet the ANSI standard. Also, check for instructions explaining the proper method of adjusting and replacing the suspension and headband.

When using head protection/hard hats, know these things:

1. **When a hard hat is necessary.** Be aware of "HARD HATS REQUIRED" signs and rules.
2. Which hard hat is necessary.
3. How to put on, wear, and take off your hard hat. Headbands are adjustable. When a headband is adjusted to the right size, it provides sufficient clearance between the shell and the headband.
4. How to properly care for, maintain, and when to dispose of your hard hat:
   - Check for cracks (including hairline cracks), dents, & wear, with each use. Replace hard hats that are cracked, or that look chalky or dull.
   - Wash your hard hat (especially the sweatbands and cradles) once a month in warm, soapy water and rinse thoroughly, also in warm water.
   - Don't paint a hard hat because paint contains solvents that may reduce a shell's protection.
   - Pay special attention to the condition of the suspension system because of the important part it plays in absorbing the impact of a blow. Look for torn cradle straps, broken sewing lines, loose rivets, defective lugs, and other defects.
   - Do not put holes in the shell for ventilation. You'll only lessen the protective capabilities of a hard hat and eliminate its electrical protection.
   - Only use stickers made for hard hats. The adhesive of ordinary stickers can degrade the shell.
   - Don't store a hard hat on the rear-window shelf of your vehicle. Sunlight and heat do damage.

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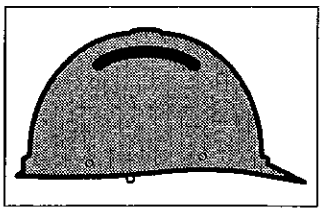

PPE—Head Protection Sign-Off Sheet

This sign-off sheet documents the employees who have taken part in a training session on PPE—Head Protection at _____.
(company name)

The session covered the following:

- When hard hats are required and necessary.
- How to properly don, doff, adjust, and wear head protection.
- The proper care, maintenance, useful life, and disposal of head protection.

The space below is for each individual who has been trained on this topic to sign his/her names.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

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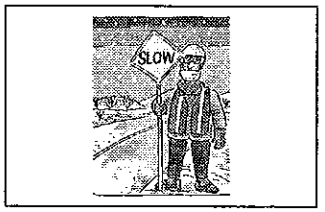


Personel Protective Equipment—High-Visibility Clothing

Overview Of Topic

Employees working in and around traffic face serious hazards. High-visibility clothing is often needed to safeguard these workers. The American National Standard for High-Visibility Safety Apparel (ANSI/ISEA 107-1999) establishes criteria for high-visibility worker apparel. The standard was approved by the American National Standards Institute (ANSI). Development of the standard was done by committee with the International Safety Equipment Association (ISEA) as the secretariat.

The voluntary consensus standard specifies minimum amounts of retroreflective materials and colors for high-visibility worker apparel. The standard also recommends specific placement of materials on the apparel for greater visibility.

Types of Clothing

High-visibility worker apparel usually consists of vests, jackets, and coveralls. These garments are worn by various employees such as roadway construction personnel and flaggers, utility workers, and survey crews.

Apparel Classes

Appendix B, which is not considered a part of ANSI/ISEA 107-1999, specifies the following criteria to aid in selection of high-visibility worker apparel:

Class 1—Use when the construction worker is paying complete attention to oncoming traffic. Class 1 apparel should only be used when there is sufficient distance between the worker and the traffic. The speed of the traffic should be less than 25 mph.

Class 2—Use during times of decreased visibility (rain, snow, and fog) or when working in areas where the hazards preclude the use of Class 1 apparel. This class of apparel should be used when employees are working on roads with high traffic levels or for traffic that exceeds 25 mph.

Class 3—Use when the highest level of visibility is needed. Use where workers face serious hazards such as traffic speeds over 50 mph. This apparel is recommend when employees are exposed to varied weather conditions. Class 3 apparel is suggested for all

highway construction workers.

The new standard says that workers:

- Should be conspicuous through the full range of body motions, and
- Can be easily recognized as a person.

Class 3 apparel performance exceeds the 1,000-foot distance visibility recommendation in the Manual on Uniform Traffic Control Devices (MUTCD).

These are only suggestions for environments where certain classes of apparel can be used. The employer must evaluate the conditions to determine what hazards are present and select the appropriate class of high-visibility clothing.

Employee Training

In 29 CFR 1926.651(d) OSHA indicates, "Employees exposed to public vehicular traffic shall be provided with, and shall wear, warning vests or other suitable garments marked with or made of reflectorized or high-visibility material."

In addition, the General Duty Clause indicates that the employer provide "a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm."

§1926.21(b)(2) says, "The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury."

Training Tips

Bring in some high-visibility clothing that is typically used on your jobsite. Demonstrate how to put it on and adjust it to fit correctly. Consider combining Heavy Construction flagger training and high-visibility clothing training.

Where To Go For More Information

29 CFR 1903.1—Purpose and Scope.

1926.21—Safety training and education.

29 CFR 1926.651(d)—Exposure to vehicular traffic.

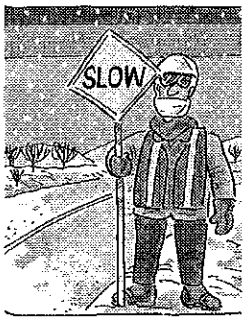
ANSI/ISEA 107-1999—American National Standard for High-Visibility Safety Apparel.

KELLER'S CONSTRUCTION TOOLBOX TALKS

Personnel Protective Equipment—High-Visibility Clothing

When you are working in and around traffic you face serious hazards. You need to wear high-visibility clothing to protect you. The American National Standard for High-Visibility Safety Apparel (ANSI/ISEA 107-1999) establishes criteria for high-visibility worker apparel. The standard was approved by the American National Standards Institute (ANSI). Development of the standard was done by committee with the International Safety Equipment Association (ISEA) as the secretariat.

The voluntary consensus standard specifies minimum amounts of retroreflective materials and colors for high-visibility worker apparel. The standard also recommends specific placement of materials on the apparel for greater visibility.



Types of Clothing

High-visibility worker apparel usually consists of vests, jackets, and coveralls. These garments are worn by various employees such as roadway construction personnel and flaggers, utility workers, and survey crews.

Apparel Classes

Appendix B, which is not considered a part of ANSI/ISEA 107-1999, specifies the following criteria to aid in selection of high-visibility worker apparel:

Class 1—Use when the construction worker is paying complete attention to oncoming traffic. Class 1 apparel should only be used when there is sufficient distance between the worker and the traffic. The speed of the traffic should be less than 25 mph.

Class 2—Use during times of decreased visibility (rain, snow, and fog) or when working in areas where the hazards preclude the use of Class 1 apparel. This class of apparel should be used when employees are working on roads with high traffic levels or for traffic that exceeds 25 mph.

Class 3—Use when the highest level of visibility is needed. Use where workers face serious hazards such as traffic speeds over 50 mph. This apparel is recommended when employees are exposed to varied weather conditions. Class 3 apparel is suggested for all highway construction workers.

The new standard says that workers:

- Should be conspicuous through the full range of body motions, and
- Can be easily recognized as a person.

Class 3 apparel performance exceeds the 1,000-foot distance visibility recommendation in the Manual on Uniform Traffic Control Devices (MUTCD).

These are only suggestions for environments where certain classes of can be used. Your employer must evaluate the conditions to determine what hazards are present and select the appropriate class of high-visibility clothing.

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Personel Protective Equipment—High-Visibility Clothing Sign-Off Sheet

This sign-off sheet documents the employees at this company, _____, who have taken part in a training session on Personnel Protective Equipment–High-visibility clothing. The session covered:

- American National Standard for High-Visibility Safety Apparel (ANSI/ISEA 107-1999).
- Types of clothing.
- Various classes of apparel.

The space below is for employees to "sign-off" that they were in attendance.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

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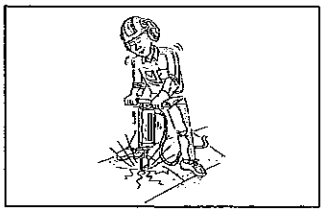

Personal Protective Equipment—Noise

Overview of Topic

Noise on construction sites is recognized by medical professionals and OSHA as an occupational hazard that can cause temporary or permanent hearing loss, stress, and other physical problems. The regulation is found in 29 CFR 1926.52.

Noise is measured by frequency (high or low pitch) and intensity (loudness measured in decibels (dB)). High frequencies are the most damaging. Noise is divided into three types:

- *Wide band*—wide frequency range (i.e., engines).
- *Narrow band*—narrow frequency range (i.e., power tools and saws).
- *Impulse*—temporary "beating" (i.e., jack hammer).

Engineering and administrative controls are good methods for minimizing worker exposure to noise. They include things like:

- Setting up noisy machinery away from as many workers as possible.
- Placing machines on antivibration mountings.
- Arranging work schedules so that each worker spends less time in noisy areas.

Many machines currently meet noise specification because manufacturers have responded to the need to cut noise. Some equipment like saws, however, can't be made to run any quieter, so proper hearing protection is a must.

Duration per day, hours	Sound level dBA slow response (A-scale)
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

In fact, when your employees are exposed to more than the Permissible Noise Exposures (PNE) in the table to the left, you must attempt to reduce the level below the PNE with engineering or administrative controls. If that is impossible or

inadequate, you must provide workers with hearing protection devices (HPDs).

HPDs do not block out sound completely, but they give some protection by reducing the amount of sound reaching the ear. At the same time, workers can hear speech and important machinery sounds. HPDs come in four types: enclosures, earmuffs, canal caps, and earplugs.

Where sound levels exceed the PNEs, you must also implement a hearing conservation program. An effective program: monitors employee exposure, administers annual audiograms, trains workers, and maintains proper recordkeeping. You should keep records on the noise created by different machines and operations at your construction site. Measurements should be taken with a sound level meter, at slow response, measured on the A-scale.

Employee Training

An effective training program might include:

- The effects of noise on hearing.
- The rules that apply to each employee's work environment to control or eliminate any exposure.
- The purpose of audiometric testing, and explanation of test procedures.
- How to recognize and avoid unsafe conditions.
- Purpose of hearing protectors, advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, use, and care.

Training programs should be updated when protective equipment, work processes, or regulations change.

Training Tips

Discuss the dangers associated with excessive noise. Dispel myths like workers will "get used to" all the noise. Have samples of all approved HPDs used at your sites. Indicate where workers will find the HPDs.

Where To Go For More Information

Construction regulatory text: 29 CFR 1926.52.

General industry regulatory text: 29 CFR 1910.95.

KELLER'S CONSTRUCTION TOOLBOX TALKS

PPE—Noise

Construction sites are noisy places, especially during certain phases of a project. However, you don't have to accept hearing loss as a cost of working at construction sites. Noise is now recognized by OSHA as a hazard that can cause:

- Temporary or permanent hearing loss.
- Drowsiness, irritability, & loss of concentration.
- Decreased morale and stress.
- High blood pressure, ulcers, headaches, and sleeping disorders.

There is no cure for noise-induced hearing loss, so preventing exposure to excessive noise is the only way to avoid hearing damage and other hazards. *Noise* is unwanted sound measured by its frequency (high or low pitch and its intensity (loudness measured in decibels (dB)). High frequencies are most damaging. Construction workers may not be exposed to more than an average of 85 dB over an eight-hour period without hearing protection being provided.

Hearing protection devices (HPDs) do not block out sound completely, but they give some protection by reducing the amount of sound reaching your ear. At the same time, you will be able to hear speech and important machinery sounds.

Keep in mind, though, that HPDs are provided only after your employer assesses the noise, attempts to reduce it using engineering and administrative controls (like having you work far from noisy equipment, limiting the amount of time you spend in noisy environments, and installing antivibration machine mountings or acoustical enclosures), and then finds that hazardous noise remains. The various HPDs that your company may provide to you include ear plugs, ear muffs, or canal caps.

Ultimately, you are responsible for protecting your own hearing. Here are some points to remember about protecting your sense of hearing:

- Have an annual hearing test.
- Make sure your hearing protection fits.
- Don't use homemade hearing protection devices; they don't work.
- Keep hearing protection devices in good condition.
- Wear hearing protection devices at work as required and at home when working on noisy projects.

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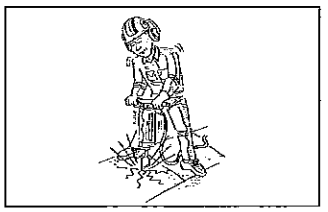

Personal Protective Equipment—Noise, Sign-Off Sheet

This sign-off sheet documents the names of employees who attended this training session on PPE—Occupational Noise at _____.
(company name)

The session covered:

- Effects of noise on hearing.
- Purpose of and need for hearing testing.
- How to protect your hearing.

The space below is for employees to "sign-off" that they were in attendance.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

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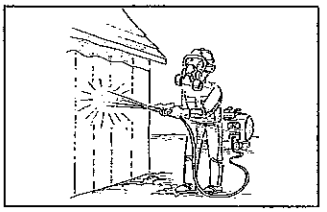


PPE—Respiratory Protection—An Overview

Overview of Topic

OSHA's revised Respiratory Protection Standard was effective April 8, 1998. The construction rule at 29 CFR 1926.103—Respiratory protection now tells you to use the general industry rule at 29 CFR 1910.134. The requirements are the same for construction and general industry.

The new standard reflects current respirator technology and better ways to ensure your employees' respirators' fit. The revised standard requires: (1) a ***written plan*** with worksite-specific procedures to tailor your program to each worksite, (2) ***hazard evaluations*** to characterize respiratory hazards and conditions of work to assist employers in selecting appropriate respirators, (3) a ***medical evaluation*** to determine ability of workers to wear the respirator selected, (4) ***fit testing*** of tight-fitting respirators to reduce faceseal leakage and ensure that the respirators provide adequate protection, (5) a ***training program*** to ensure that your employees use respirators safely, and (6) a ***periodic program evaluation*** to ensure that respirator use continues to be effective.

Why use respirators?

Respirators protect your employees against hazardous atmospheres containing particulates/dusts (silica), vapors and gases (carbon monoxide), Immediately Dangerous to Life or Health (IDLH) atmospheres (oxygen deficiency), physical agents (radioactive particles), or biological agents (mold spores).

OSHA, the National Institute for Occupational Safety and Health (NIOSH), and the Mine Safety and Health Administration (MSHA), all regard effective respirator programs as essential to workers' health.

When are respirators required?

General respiratory protection requirements begin at 29 CFR 1926.55—Gases, vapors, fumes, dusts, and mists. Employees exposed to any material or substance at a concentration above the permissible exposure limit (PEL) specified in Appendix A to 1926.55 must be avoided.

Compliance must be achieved by using administrative (i.e., employee shift changes) or engineering (i.e., ventilation) controls first. When these controls are not feasible to achieve full compli-

ance, protective equipment must be used to keep the exposure within the PELs prescribed.

Whenever respirators are used, their use must comply with 1926.103—Respiratory protection. This 1926.103 now points you to 1910.134.

Various airborne contaminants in Appendix A of 1926.55 do not list PELs but instead send you to another portion of the construction regulations. These contaminants are called OSHA specific contaminants. Examples are: Asbestos (1926.1101), alpha-Naphthylamine (1926.1104), and lead (1926.62). There are approximately 27 of these substances. These OSHA specific contaminants have their own PELs and specific requirements.

When you are required to use respirators, then all requirements of 29 CFR 1910.134 apply.

Employee Training

Training requirements for respirator use are found in either the new respiratory standard at 1910.134 or in the OSHA specific contaminants rules. If you are involved in construction operations involving an OSHA specific substance, your training program must be all inclusive, i.e., you must cover all training requirements in the respiratory rule and also the OSHA specific rule.

Training Tips

Concentrate on those substances found at your jobsite, and the respiratory protection provisions.

Where To Go For More Information

29 CFR 1926.55—Gases, vapors, fumes, dusts, and mists

29 CFR 1926, Subpart D—Occupational health and environmental controls

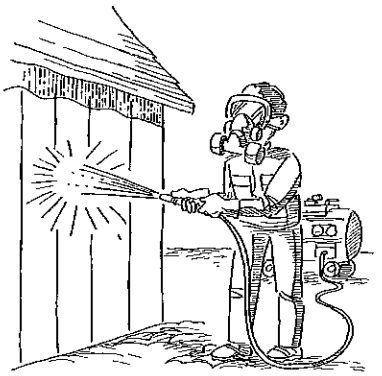
29 CFR, Subpart Z—Toxic and hazardous substances

29 CFR 1910.134—Respiratory protection

KELLER'S CONSTRUCTION TOOLBOX TALKS

PPE—Respiratory Protection—An Overview

OSHA's Respiratory Protection Standard was effective April 8, 1998.



It is estimated that the new rule will prevent more than 4,000 injuries and illnesses annually. With the new rule, in addition to saving lives and preventing injuries and illnesses, employers will realize up to $94 million a year in savings on injury and illness-related costs. The new standard reflects current respirator technology and better ways to ensure they fit.

The revised standard requires:

- A ***written plan*** with worksite-specific procedures to tailor your employers program to each worksite.
- A ***hazard evaluation*** to characterize respiratory hazards and conditions of work to assist employers in selecting appropriate respirators.
- A ***medical evaluation*** to determine ability of workers to wear the respirator selected.
- ***Fit testing*** of tight-fitting respirators to reduce faceseal leakage and ensure that the respirators provide adequate protection.
- A ***training program*** to ensure that your employees use respirators safely.
- A ***periodic program evaluation*** to ensure that respirator use continues to be effective.

Why use respirators?

Respirators protect you against hazardous atmospheres containing particulates/dusts (silica), vapors and gases (carbon monoxide), Immediately Dangerous to Life or Health (IDLH) atmospheres (oxygen deficiency), physical agents (radioactive particles), or biological agents (mold spores).

When are respirators required?

Exposure to any material or substance at a concentration above the permissible exposure limit (PEL) specified in Appendix A to 1926.55 must be avoided. Compliance must be achieved by using administrative (i.e., employee shift changes) or engineering (i.e., ventilation) controls first. When these controls are not feasible to achieve full compliance, protective equipment must be used to keep the exposure within the PELs prescribed.

Whenever respirators are used, their use must comply with 1926.103—Respiratory protection. Various airborne contaminants in Appendix A of 1926.55 do not list PELs but instead send you to another portion of the construction regulations. These contaminants are called OSHA specific contaminants. Examples are: Asbestos (1926.1101), alpha-Naphthylamine (1926.1104), and lead (1926.62). There are approximately 27 of these substances. These OSHA specific contaminants have their own PELs and specific requirements. When you are required to use respirators, then all requirements of 29 CFR 1910.134 apply.

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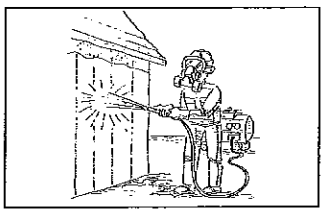

PPE—Respiratory Protection Sign-Off Sheet

This sign-off sheet documents the names of employees who attended this training session on Respiratory Protection at _____ .
(company name)

The session covered:

- Introduction to the new rule.
- Why use respirators?
- When are respirators required?

The space below is for employees to "sign-off" that they were in attendance.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

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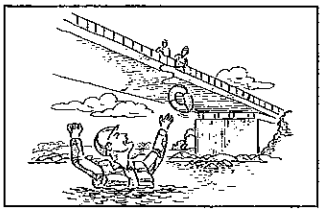


PPE — Working Near Water

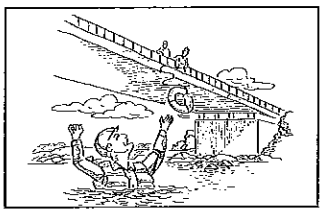
Overview Of Topic

Construction work over or near water is regulated under 29 CFR 1926.106. The purpose of the rule is to prevent drowning. The rule contains these requirements:

- Provide employees working over or near water, where the danger of drowning exists, with a U.S. Coast Guard-approved life jacket or buoyant work vests.
- Ensure that, prior to and after each use, the buoyant work vests or life preservers are inspected for defects which would alter their strength or buoyancy.
- Ensure that defective life jackets and buoyant work vests are not used.
- Provide ring buoys with at least 90 feet of line.
- Ensure that ring buoys are readily available for emergency rescue operations.
- Do not place ring buoys more that 200 feet apart.
- Provide at least one life saving skiff "immediately available" at locations where employees are working over or adjacent to water. Immediately available means the skiff: is in the water or capable of being quickly launched; is able to retrieve an employee from the water no more than three to four minutes from the time it enters the water; has at least one designated person present in the area to respond to water emergencies and operate the skiff when employees are above water; and is equipped with both a motor and oars. A communication system like a walkie-talkie, must be used to inform the skiff operator of an emergency and to inform the operator where the skiff is needed.

Injured employees must be promptly (within three to four minutes after the injury occurred) treated by medical personnel or an employee certified in first aid.

If not only drowning hazards, but impact hazards, are involved, then fall protection, such as safety nets, safety harnesses, or guardrail systems, must be used to prevent employees from falling into the water. Employees working on or under bridges who are



PPE — Working Near Water

constantly protected by guardrail systems, nets, or body harness systems are deemed to be adequately protected from the danger of drowning and are not required to wear life jackets or buoyant work vests. Employees performing work on or under bridges who are not constantly protected from falling into the water are required to wear life jackets or buoyant work vests.

Employee Training

Life saving equipment, especially life jackets and buoyant work vests, is much like personal protective equipment (PPE), and the training elements recommended are similar to those of any PPE chapter. For the purposes of this chapter, the term life saving equipment means life jackets, buoyant work vests, ring buoys, and life saving skiffs. An effective life saving equipment training program should involve training employees so they know:

- When life saving equipment is necessary.
- What life saving equipment is necessary.
- The location and availability of life saving equipment.
- How to properly don, doff, adjust, and wear life jackets and buoyant work vests.
- How to properly use ring buoys and life saving skiffs.
- The limitations of the life saving equipment.
- The proper care, maintenance, useful life, and disposal of life saving equipment.

Training Tips

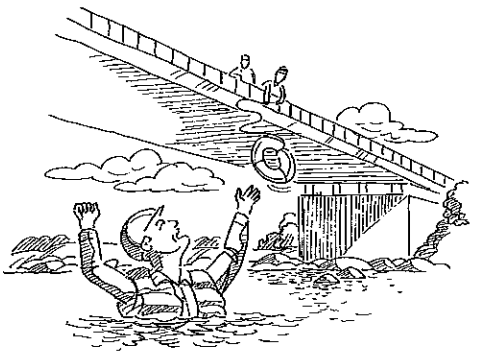
During training on working near water review drowning, impact, and other hazards most commonly found over or near water at your jobsites, and present the kinds of life saving equipment required at your company.

Where To Go For More Information

OSHA regulations 29 CFR 1926.104, 29 CFR 1926.105, 29 CFR 1926.500-.503

KELLER'S CONSTRUCTION TOOLBOX TALKS

PPE—Working Near Water



Water presents a serious threat to you when you work near or over it — the threat of drowning. When drowning occurs, minutes count. Three to four minutes without oxygen causes permanent brain damage. No matter how good a swimmer you think you may be, the danger of drowning is real. When you fall into the water, you could strike your head and loose consciousness, your clothes could become waterlogged, or currents could overcome you.

So what can be done to prevent drowning? OSHA requires these life saving devices for work near or over water.

Life saving equipment:	Requirements:
Life jacket OR Buoyant work vest	Approved by the U.S. Coast Guard. Used where the danger of drowning exists. Inspected for strength and buoyancy defects before and after each use. Not used if defective.
Ring buoy	Provided with at least 90 feet of line. Located where readily available for emergency rescue operations. Placed not more than 200 feet from another ring buoy.
Life saving skiff (small boat)	Equipped with both a motor and oars. Located where immediately available at locations where employees are working over or adjacent to water. Placed in the water or so that it is capable of being quickly launched and able to retrieve an employee from the water no more than 3 to 4 minutes from the time it enters the water. When employees are above water, the skiff has at least one designated person present in the area to respond to water emergencies and operate the skiff. A communication system like a walkie-talkie, must be used to inform the skiff operator of an emergency and to inform the operator where the skiff is needed.

Preventing impact hazards from falling

If impact hazards from falling are also involved, then fall protection must be used. However, the requirement for life jackets and buoyant work vests varies as follows:

If you are working on or under bridges and are:	Then you are:
Not constantly protected from falling into the water	Required to wear life jackets or buoyant work vests.
Constantly protected by safety nets, body harnesses, or guardrail systems	Not required to wear life jackets or buoyant work vests because OSHA deems you to be adequately protected for the danger of not only falls, but drowning.

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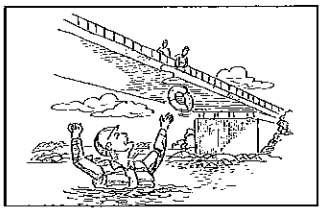

PPE—Working Near Water Sign-Off Sheet

This sign-off sheet documents the employees who have taken part in a training session on PPE—Working Near Water at _____.
(company name)

The session covered:

- The hazards of drowning when working near or over water.
- The types of life saving equipment available.
- The need for fall protection in certain situations working near or over water.

The space below is for each individual who has been trained on this topic to sign his/her names.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**
_____	_____
_____	_____
_____	_____
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_____	_____
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_____	_____
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_____
Supervisor's Signature

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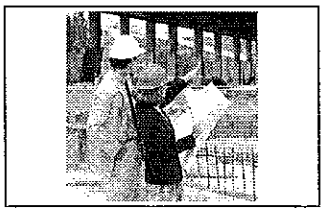

Personal Protective Equipment—OSHA's Top 5 Personal Protective Equipment (PPE) Violations

Overview of Topic

OSHA requires the use of personal protective equipment (PPE) to reduce your employees' exposure to hazards at your jobsites. You are required analyze each jobsite to determine all exposures to hazards. Then you must decide if engineering or administrative controls, the first line of defense, is feasible or effective in reducing exposures to acceptable levels. If not, PPE must be used.

This Toolbox Talk gives you the opportunity to share with your employees the top five PPE violations that OSHA inspectors constantly find not being followed—or followed incorrectly—at construction jobsites. Sharing these top 5, and ensuring they are followed correctly and consistently, will instill the notion that you are concerned about safety and your employees welfare.

#1 **Head protection**—When your employees work in areas where there is a possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns, they must be protected by hard hats. (§1926.100(a))

This is currently the 3rd most cited construction regulation.

#2 **Eye and face protection**—Your employees must be provided with eye and face protection equipment when machines or operations present potential eye or face injury. Injury can come from physical, chemical, or radiation agents. (§1926.102(a)(1))

This is currently the 25th most cited construction regulation.

#3 **Protective equipment**—Personal protective equipment (PPE), including PPE for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, must be provided, used, and maintained in a sanitary and reliable condition whenever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation, or physical contact. (§1926.95(a))

#4 **Safety nets**—Safety nets must be provided when workplaces are more than 25 feet above the ground or water surface, or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or safety belts is impractical. (§1926.105(a))

#5 **Employer responsibility**—You are responsible for ensuring your employees are wearing appropriate PPE in all operations where: (1) there is an exposure to hazardous conditions, and (2) the OSHA construction regulations indicate the need for using PPE to reduce hazards to your employees. An example of this would be the OSHA requirement for respirators during certain asbestos operations. (§1926.28(a))

Employee Training

The OSHA rules require the following training for employees using personal protective equipment. Employees must:

- Be trained to recognize and avoid unsafe conditions at their worksites.
- Understand the regulations applicable to their work environment, to control or eliminate the hazards.

For employees that use respirators, training requirements for respirators are found in either the new respiratory standard at §1910.134 or in the OSHA specific contaminants rules, i.e., the lead or asbestos standard.

Training Tips

This Toolbox Talk is designed to give supervisors and employees the opportunity to discuss those OSHA rules that are the most violated by construction contractors.

This will be a good time to go over your company's policy in regards to the wearing of personal protective equipment.

Where To Go For More Information

Construction regulatory text: §1926.28—Personal protective equipment.

Construction regulatory text: §1926, Subpart E—Personal protective and life saving equipment.

General industry regulatory text: §1910.134—Respiratory protection.

KELLER'S CONSTRUCTION TOOLBOX TALKS

OSHA's Top 5 Personal Protective Equipment Violations

OSHA requires the use of personal protective equipment (PPE) to reduce your exposure to hazards at your jobsite.

But first, employers are required to analyze each jobsite to determine all exposures to hazards. Then they must decide if engineering or administrative controls, the first line of defense, will work to reduce exposures to acceptable levels. If not, PPE must be used.

This Toolbox Talk discusses the top five PPE violations that OSHA inspectors constantly find not being followed—or followed incorrectly—at construction jobsites. They are:

#1 Head protection

When you work in areas where there is a possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns, you must be protected by hard hats.

#2 Eye and face protection

You must be provided with eye and face protection equipment when machines or operations present potential eye or face injury. Injury can come from physical, chemical, or radiation agents.

#3 Protective equipment

Personal protective equipment (PPE), including PPE for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, must be provided, used, and maintained in a sanitary and reliable condition whenever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation, or physical contact.

#4 Safety nets

Safety nets must be provided when workplaces are more than 25 feet above the ground or water surface, or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or safety belts is impractical.

#5 Employer responsibility

Your employer is responsible for ensuring you are wearing appropriate PPE in all operations where:

- There is an exposure to hazardous conditions.
- The OSHA construction regulations indicate the need for using PPE to reduce the hazards. An example of this would be the OSHA requirement for respirators during certain asbestos operations.

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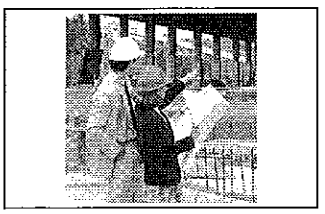

Personal Protective Equipment—OSHA's Top 5 Personal Protective Equipment (PPE) Violations Sign-Off Sheet

This sign-off sheet documents the names of employees who attended this training session on OSHA's Top 5 Personal Protective Equipment (PPE) at _____.
(company name)

The session covered:

- Head protection.
- Eye & face protection.
- Protective equipment.
- Employer responsibility.
- Safety nets.

The space below is for employees to "sign-off" that they were in attendance.

Date of Training: _____ **Job Location:** _____

Employee Signature	**Print Name Here**

_____
Supervisor's Signature

Sign-off sheets may be copied and distributed to workers for use during your training session. Please refer to HOW TO USE THIS MANUAL for restrictions.

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