



Personal Protective Equipment

Protecting Workers from Hazards

Workplace safety should begin with a hazard assessment. A hazard assessment and a job safety analysis focus on elements that may cause risks. Six main hazards that are looked for are:

- 1. Safety Hazards** - are the most common and will be present in most workplaces at one time or another. They include unsafe conditions that can cause injury, illness and death.
- 2. Biological Hazards** - Associated with working with animals, people, or infectious plant materials.
- 3. Chemical Hazards** - are present when a worker is exposed to any chemical preparation in the workplace in any form (solid, liquid or gas).
- 4. Ergonomic Hazards** - occur when the type of work, body positions, and working conditions put strain on the body.
- 5. Work Organization Hazards** Hazards or stressors that cause stress (short term effects) and strain (long-term effects). These are the hazards associated with workplace issues.
- 6. Physical Hazards** - are factors within the environment that can harm the body without necessarily touching it.

If the hazards are not able to be modified to a safe environment by engineering changes employers may find it necessary to provide personal protective equipment (PPE) to assure a safe work place for employees.

Personal Protective Equipment (PPE)

PPE is clothing or equipment designed to protect workers from physical hazards when on a worksite. PPE should only be considered as a last line of defense between a hazard and the worker. Attempts to control workplace risks and hazards should always be addressed first.

EYE PROTECTION

Some of the most common types of eye and face protection include the following:

- **Safety spectacles.** These protective eyeglasses have safety frames constructed of metal or plastic and impact-resistant lenses.
- **Goggles.** These are tight-fitting eye protection that completely cover the eyes, eye sockets and the facial area immediately surrounding the eyes and provide protection from impact, dust and splashes.



Eye protection is critical in areas that may have flying debris.

- **Welding shields.** Constructed of vulcanized fiber or fiberglass and fitted with a filtered lens, the shield protects eyes from burns caused by infrared or intense radiant light; and also protects both the eyes and face from flying sparks, metal spatter, etc.
- **Laser safety goggles.** These specialty goggles protect against intense concentrations of light produced by lasers.
- **Face shields.** These transparent sheets of plastic extend from the eyebrows to below the chin and across the entire width of the employee's head.

HEAD PROTECTION - HARD HATS

When selecting protective headgear that meets ANSI standard requirements, employers should ensure that hard hats provide appropriate protection against potential workplace hazards.





Some hard hats are designed for electrical work and protect against falling objects, impact and high voltage.

Hard hats are divided into three industrial classes:

- **Class A** hard hats provide impact and penetration resistance along with limited voltage protection (up to 2,200 volts).
- **Class B** hard hats provide the highest level of protection against electrical hazards, with high-voltage shock and burn protection (up to 20,000 volts). They also provide protection from impact and penetration hazards by flying/falling objects.
- **Class C** hard hats provide lightweight comfort and impact protection but offer no protection from electrical hazards.

FOOT AND LEG PROTECTION

Foot and leg protection choices include the following:

- Leggings protect the lower legs and feet from heat hazards. Safety snaps allow leggings to be removed quickly.
- Metatarsal guards protect the instep area from impact and compression, these guards may be strapped to the outside of shoes.
- Toe guards fit over the toes of regular shoes to protect the toes from impact and compression hazards.
- Combination foot and shin guards protect the lower legs and feet, and may be used in combination with toe guards when greater protection is needed.

- Safety shoes have impact-resistant toes and heat-resistant soles that protect the feet against hot work surfaces. The metal insoles of some safety shoes protect against puncture wounds. Safety shoes may also be designed to be electrically non-conductive.

HAND AND ARM PROTECTION

Gloves made from a wide variety of materials are designed for many types of workplace hazards. In general, gloves fall into four groups:

- Gloves made of leather, canvas or metal mesh;
- Fabric and coated fabric gloves;
- Chemical and liquid-resistant gloves;
- Insulating rubber gloves

BODY PROTECTION

Examples of body protection include laboratory coats, coveralls, vests, jackets, aprons, surgical gowns and full body suits. The clothing should be carefully inspected before each use, it must fit each employee properly.

HEARING PROTECTION

Some types of hearing protection include:

- Single-use earplugs are made of waxed cotton, foam, silicone rubber or fiberglass wool. They are self-forming and, when properly inserted, they work as well as most molded earplugs.
- Pre-formed or molded earplugs must be individually fitted by a professional and can be disposable or reusable. Reusable plugs should be cleaned after each use.
- Earmuffs require a perfect seal around the ear. Glasses, facial hair, long hair or facial movements such as chewing may reduce the protective value of earmuffs.

Conclusion

There are many other types of PPE available. Your employer will provide the appropriate protection for your job. Always follow manufacturers recommendation for use.

DO YOUR PART - BE SAFE
PPE can only do its job if you USE IT, MAINTAIN IT,
and HAVE IT REPLACED when it is compromised.

SAFETY TRAINING SIGN-IN

Company Name: _____ Date: _____

Subject: Personal Protective Equipment - PPE

The following employees participated in this training.

1. _____
2. _____
3. _____
4. _____
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6. _____
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