

Personal Protective Equipment

Purpose of PPE

The purpose of **Personal Protective Equipment (PPE)** is to protect you from the risk of injury by creating a barrier between you and a hazard.

PPE can help protect your eyes, face, head, feet, hands, hearing, respiratory tract or entire body.

The use of personal protective equipment, however, is not a substitute for safe work practices.



General Requirements

Employers are required to examine the workplace for hazards that may require the use of PPE and to provide you with the appropriate equipment.

And you have a responsibility too. You must be sure that:

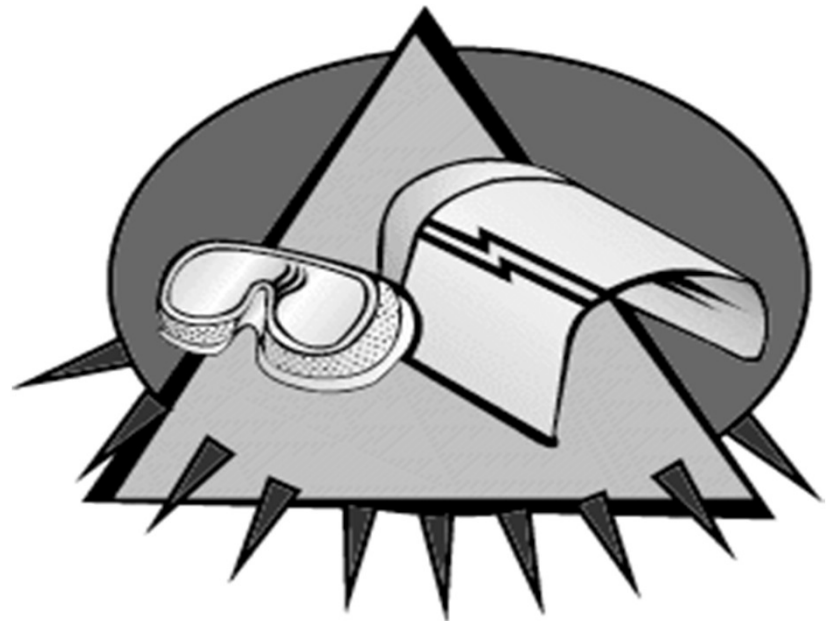
- You are trained in using the PPE
- The PPE fits you properly
- You use your PPE correctly



Eye and face protection

Eye and face protection includes safety glasses, goggles, face shields, or welding shields designed to protect you from hazards such as:

- Impact
- Heat
- Chemicals
- Dust
- Optical radiation



Eye and face protection

Safety glasses and goggles can protect your eyes from impact hazards such as:

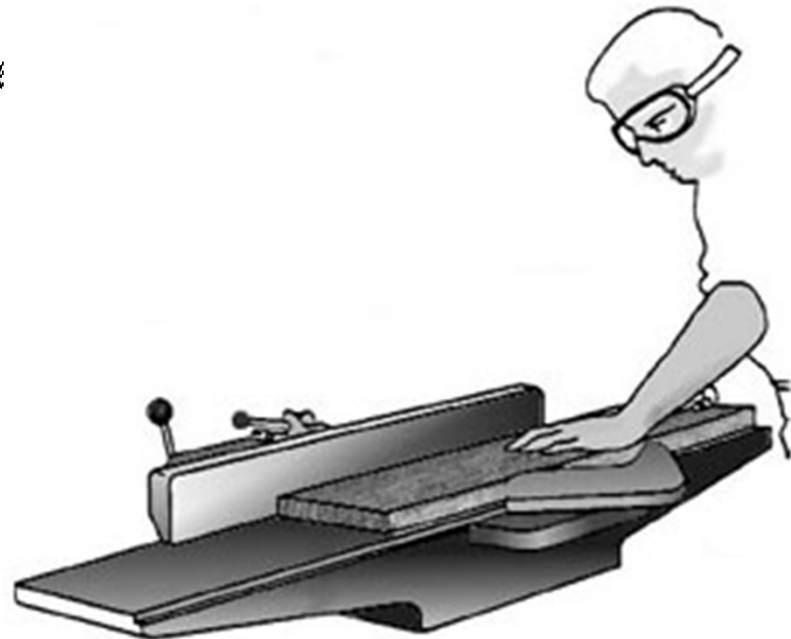
- Flying fragments
- Flying objects
- Particles
- Sand and dirt



Eye protection

Some of the tasks that may require safety glasses include:

- Chipping
- Grinding
- Masonry work
- Wood working
- Sanding
- Buffing

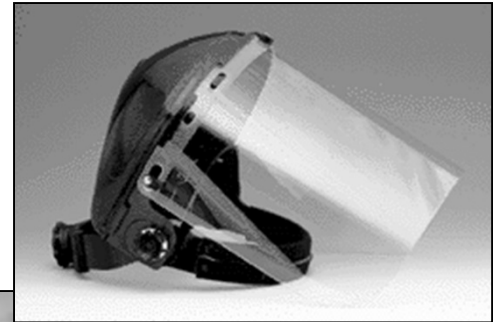


Eye and face protection

For added protection, a face shield may be worn in combination with safety glasses or goggles.

A face shield is intended to help protect your entire face from impact hazards.

Face shields will not protect you from heavy or fast moving projectiles.



Eye and face protection

When working around heat hazards, the use of face shields in combination with safety glasses or goggles can protect your eyes during furnace operations such as:

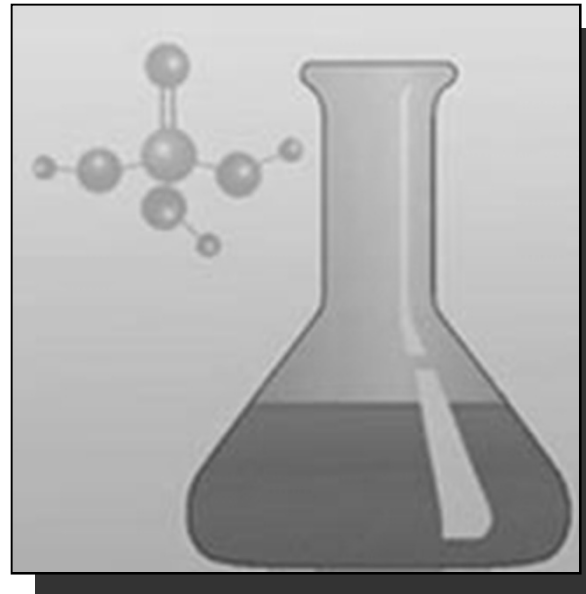
- Pouring
- Casting
- Hot dipping
- Other similar activities



Eye and face protection

Eye injuries are often caused by direct contact with chemicals. Serious and irreversible damage can occur when chemical substances contact the eyes in the form of:

- Splashes
- Mists
- Vapors
- Fumes



Eye and face protection

Welding helmets are designed to protect your eyes and face from the visible light and radiant energy produced when welding. A welding helmet alone is not sufficient protection for your eyes, and should be worn in combination with safety glasses or goggles to protect you from:

- Flying sparks
- Metal spatters
- Slag chips
- Optical radiation
- Heat

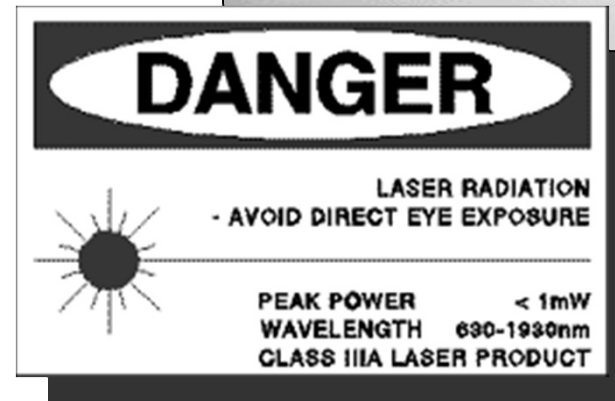


Eye and face protection

Laser light radiation can be extremely dangerous to the unprotected eye, and direct or reflected beams can cause permanent eye damage.

Unprotected laser exposure may result in eye injuries including:

- Retinal burns
- Cataracts
- Permanent blindness



Head protection

Hard hats are designed to protect your head from:

- The impact of falling objects
- Contact with fixed objects
- Contact with exposed electrical conductors



Head protection

Hard hats have a rigid shell and a suspension system to deflect and absorb the shock of a blow to the head. They may also be made from a material that provides various levels of protection from electricity.

- Class E – protection from impacts plus 20,000 volts
- Class G – protection from impacts plus 2,200 volts
- Class C – protection from impacts. No electrical protection.



Foot protection

You may need foot protection from hazards such as:

- Falling or rolling objects
- Sharp objects
- Molten metal
- Hot surfaces
- Wet, slippery surfaces

Safety shoes should be sturdy and have an impact-resistant toe.



Foot protection

Before you begin work you should:

- Ensure the type of footwear is appropriate for the job
- Select footwear that fits
- Avoid leather footwear when working with acids, caustics, and other chemicals
- Inspect footwear regularly and replace when required



Hand protection

The most common way to protect your hands is to wear gloves. Different gloves protect your hands from different hazards. Without proper hand protection, the following injuries could occur:

- Burns
- Bruises
- Abrasions
- Cuts
- Punctures
- Fractures
- Amputations
- Chemical Exposures



Hand protection

Before you begin working with your gloves you should:

- Ensure the gloves you will use are designed to protect you from the hazards you may encounter
- Inspect your gloves
- Be certain the gloves fit properly to your hands

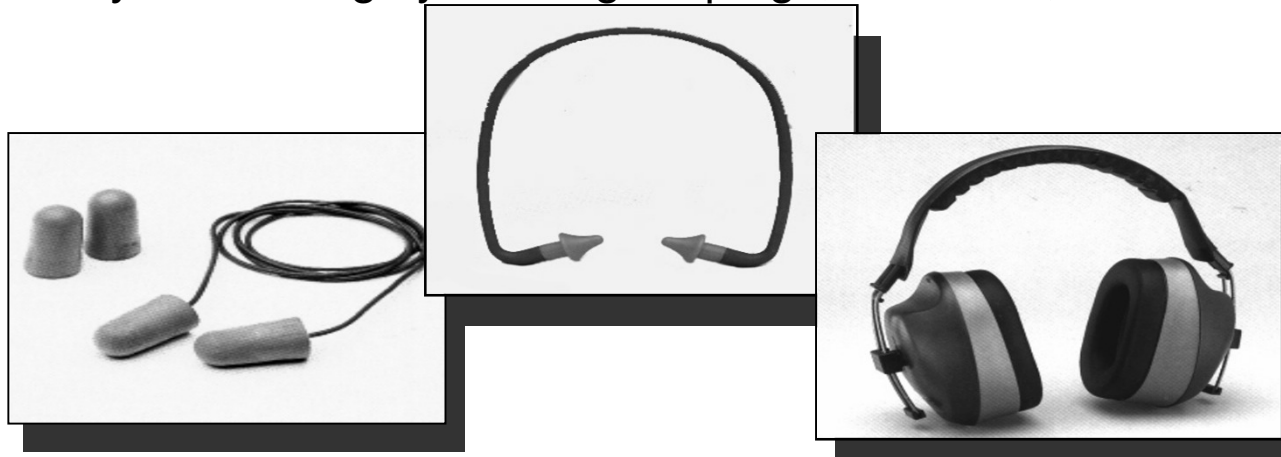


Hearing protection

In some workplaces, hearing protection may be needed due to high noise levels.

Unlike some other work related injuries, losing your hearing can be a slow process. However, failure to protect your hearing can result in a permanent disability.

You can protect your hearing by wearing earplugs, ear muffs, or both.



Hearing Protection

Foam and PVC earplugs are small, lightweight, and disposable. They must be worn properly to provide maximum protection.



Earmuffs are worn outside your ears. You must have a good seal around your ears for them to be effective.

Respiratory Protection

If the use of respirators is required to do a particular job, OSHA requires a written respiratory protection program be established and implemented by the employer.

Some of the OSHA requirements for a written respiratory protection program include:

- Procedures for selection, use, and maintenance of the equipment.
- Medical evaluations for the user of the respirator.
- Fit testing and training for the user of the respirator.



Types of Respirators

APR – Air purifying Respirator

APR consists of a face piece worn over the mouth and nose with a filter element that filters ambient air before inhalation.



Types of Breathing Apparatus

SCBA – Self contained Breathing Apparatus



SCBA provides the highest level of respiratory protection. It includes a full face piece connected to a hose and a portable source of compressed air.

SAR – Supplied Air Respirator



SARs, like SCBAs, provide the highest level of respiratory protection. An SAR includes a full face piece connected to an air source that is away from the contaminated area.

Full body protection

When full body protection is needed, OSHA has certain requirements that must be met.

These requirements include:

- Training
- Equipment maintenance
- Fit testing
- Age requirements



Summary

PPE is very important in helping to keep you safe in the workplace. In order to StartSafe and StaySafe concerning PPE:

- Be sure you receive thorough job and PPE training from your employer before you get started
- Choose the right PPE for job
- Make sure the PPE fits you properly
- Inspect your PPE to ensure it is in good condition
- Discard PPE that is not safe