# Personal Protective Equipment (PPE): Eye and Face Protection

Your ability to see is precious, so it is important to protect it with the right PPE.

**Hazards**
Your eyes and face may be injured when they are exposed to:

- Splashes of chemicals or hot liquids
- Flying objects
- Fumes, gases, mists and aerosols
- Electric arc flash
- Biological pathogens in blood and other potentially infectious materials
- Intense light or optical radiation (ultraviolet, visible or infrared light)

Eye and face protection may include specially designed glasses, goggles and face shields. Ordinary sunglasses and vision correction lenses and glasses don't offer standardized hazard protection and are not suitable to protect your eyes and face from the hazards listed above. Eye and face protection should meet applicable regulatory standards specific to your location, such as ANSI Z87.1 in the United States.

Lenses or face shields create a barrier between your eyes and face and hazards that may be present. Lenses are attached to strong frames that prevent them from being pushed into the eyes. Frames are often resistant to heat. Shields may be attached to frames, head bands, helmets or hoods. Shields can be specifically rated for electrical arc flash protection. Lenses and shields may be clear, tinted, photochromic or polarized.

The materials that eye and face protection is made with may resist chemicals, heat and certain types of light, such as arc flash. Check the manufacturer's instructions and read the markings to learn about the features and certifications of each piece of eye or face protection.

**Types**
**Safety glasses** are protective eyeglasses with metal or plastic frames and impact-resistant lenses that also can be corrective if needed. **Impact-resistant glasses** are tested per applicable standards that ensure they offer documented protection from flying objects that may impact them.

**Goggles** protect eyes, eye sockets and the facial area immediately surrounding the eyes. They may be solid or ventilated. Some goggles may fit over corrective vision glasses. **Laser glasses or goggles** provide a range of protection against the ultraviolet, infrared and intense concentrations of reflected light radiation produced by lasers. **Side shields** block particles that may enter the eyes from the side. Most employers require that they be built into safety glasses rather than detachable or clip-on attachments.

**Face shields** are transparent sheets of plastic that extend from the brow to below the chin and span the entire width of the head. Face shields can protect the face from dusts, splashes and sprays. Wear face shields with safety glasses or goggles. **Arc flash face shields** provide protection against the heat and intense light of an arc flash. **Welding shields** are made of

heat-resistant material and a filtered lens designed to protect the eyes and face from hazards associated with welding, brazing, soldering and cutting. Welding shields are usually integrated with hoods or helmets and may be attached to powered air-purifying respirators. Welding shields protect the eyes from burns caused by infrared, ultraviolet or intense radiant light and from flying sparks, metal spatter and slag chips.

Check the hazard assessment to determine which eye and face protection to use. Ask your supervisor if you have any questions. Check the manual and the markings on the protection for information about its certifications and features.

**Use and Considerations**

Eye protection should cover the eyebrow to the cheekbone and across from the nose to the bony area on the outside of the face and eyes. Face protection should cover from the brow to below the chin and should span the entire width of the head.

Choose protection that keeps gaps between the edges of the device and the face to a minimum. Your employer may individually assign and fit eye and face protection to meet individual needs.

The frame should be as close to the face as possible. Eye protection is supported by the bridge of the nose and face shields are supported by head bands. Eye and face protection should fit snuggly but should not cause pain or discomfort. Do not modify eye or face protection, such as by adding unapproved padding to nose or earpieces. Make sure you can see in all directions without any major obstructions in your field of view.

Avoid rough handling. Scratches can impair vision, weaken materials and negate protective properties.

If you require corrective vision glasses or contact lenses, consult your employer about how they may impact eye and face protection. Your employer may provide protection that fits over glasses or contact lenses or prescription eye and face protection. If chemical exposure is a hazard, contact lenses may be discouraged or forbidden. Check with your employer for more information.

**Care**

Inspect eye and face protection before each use. Damage may interfere with vision and may not provide adequate protection. Check for scratches, pitting, chips, cracks, breaks, bending or warping. Also check for twisted, loose, discolored or worn bands or padding. If you find any defects or damage, follow your company's procedures to report the issue, and remove the eye and face protection from service.

Clean and disinfect eye and face protection daily. To help prevent fogging, clean eye and face protection frequently. Use anti-fog cleaning wipes to prevent fogging. Follow the cleaning instructions from the manufacturer to avoid damaging the protection.

Store eye and face protection in a clean, dry place where it will not fall or be damaged. Keep glasses and goggles in a case with the lenses facing up to prevent damage, scratches and contamination when they are not being worn.