

# PERSONAL PROTECTIVE EQUIPMENT



Appropriate Personal Protective Equipment (PPE) must match the task hazards and is prescribed when hazards cannot be eliminated solely by administrative or engineering controls.

## Eye and Face Protection

Always wear safety glasses when working near chemicals or equipment, sparks, flying particles, chemical splashes, and glare. Safety glasses are available to employees performing tasks involving possible eye injury hazards.

Eye protection devices can be classified into four groups: safety glasses, goggles, face shields, and welding helmets. Safety glasses offer protection from objects and dust entering from the front. Goggles offer protection from flying particles from the front and sides as well as from hazardous chemical exposures. Face shields are used with safety glasses or goggles to provide protection to the entire face from severe chemical splash, molten metal, and airborne particulates. Welding helmets cover the eyes, face, top and sides of the head to protect individuals from hazards generated during welding operations.

## Respiratory Protection

Respiratory protective equipment limits exposure to atmospheric concentrations of hazardous dusts, mists, vapors, fumes, and gases when engineering controls cannot eliminate the hazard. Respirator types include self-contained breathing apparatus, supplied air apparatus, and chemical cartridge respirators. Please refer to the Institute [Respiratory Protection Program](#) for specific information.

## Hand Protection

Gloves provide a barrier from hazards to the hands. Gloves are made from various materials, each providing protection from a specific type of hazard. For example, canvas and leather gloves offer protection from sharp abrasive objects. Rubber, latex, neoprene, and nitrile glove offer protection from specific chemicals. **No single glove offers protection from all chemicals. It is important to obtain the right glove and check it often for degradation.** EH&S can have a [glove selection](#) guide and can assist further by contacting [safety@caltech.edu](mailto:safety@caltech.edu) or calling x6727.

## Foot Protection

Protective footwear offers protection from falling objects, punctures, crushing, slipping, and electrical shock. There are numerous safety shoe designs available, and it is essential to wear the right shoe for the hazards present. Safety toe shoes protect feet from falling or rolling objects, cuts and punctures. Rubber boots limit exposure to chemicals and provide improved traction on slippery surfaces. It is also important to choose the boot construction material (neoprene, nitrile, rubber) that offers the greatest resistance from the chemicals being utilized. Closed-toe shoes are required when working in laboratories and animal facilities.

## Hearing Protection

Hearing protection, including plugs and muffs, should be worn in noisy environments. EH&S performs periodic evaluations of areas that may fall under the [Institute's Hearing Conservation Program](#). For more information, check with your Supervisor or call EH&S at x6727.