



Guidance Document

Gloves/Personal Protective Equipment (PPE)

PPE is equipment worn to minimize exposure to specific hazards. PPE can protect the worker from physical and/or chemical hazards. Examples of PPE include gloves, eye protection, respirators, aprons and coveralls. PPE is only one element in a complete safety program. Remember that PPE does not reduce the hazard itself and it cannot guarantee total protection. PPE must be used if the hazard cannot be removed or adequately controlled by other means, such as engineering controls, work practices, or administrative controls. For example, it is better, when practical, to use a fume hood for respiratory protection than to wear an air-purifying respirator.

PPE must be carefully selected to match the hazard(s) present and the degree of protection required. Any PPE must fit the worker and must be worn properly. Some types of PPE, such as chemical-resistant gloves, are disposable after a single use. Other kinds of PPE (e.g. respirators) require regular maintenance, inspection, cleaning and storage. Some PPE needs special training prior to its use. The specific types of PPE that might be required include:

Eye and Face Protection: At a minimum all personnel (students, faculty, staff, and visitors) must wear safety glasses wherever chemicals are used or stored. Goggles and face shields may be required. Eye and face protection is needed when there is a risk from flying particles, liquid chemicals, acids or caustic liquids, chemical gases or vapors. The eyes of personnel must be protected against radiation during welding, brazing, using open lasers, or any other operations that emit light.

Head Protection: Hard hats must be worn where there is a danger of falling objects. Head protection is infrequently required on campus.

Foot Protection: Each supervisor or faculty advisor responsible for a workplace should determine the footwear which is required. In some workplaces safety shoes might be required to protect against

dropping heavy objects. Some shoes provide puncture protection against nails, wire or metal scrap. In workplaces such as laboratories and the foundry areas bare feet and sandals are prohibited. Other footwear restrictions may be necessary to protect personnel from chemical exposure. For example, in most labs the wearing of open or pervious shoes should be prohibited.

Hand Protection: Gloves are needed to protect personnel from cuts, scrapes, punctures, burns, freezing, chemical absorption. The type of glove selected must be appropriate for the hazard. A glove must be resistant to permeation, penetration and degradation. The wrong glove may provide little or no protection. This is particularly true with chemical absorption where the wrong glove may allow a chemical to reach your skin, and you may be unaware of your exposure. Charts are available from glove manufacturers, government agencies and universities which can assist in glove selection. [Click here for links](#). In addition, you should contact EHS for assistance.

Body and Skin Protection: In addition to eye, face and hand PPE, other body and skin protection may be necessary. Some operations will require the wearing of aprons, coveralls, lab coats or impervious garments. As with other PPE, the type of PPE must be selected based upon the hazards.

Hearing Protection: Ear muffs or ear plugs are worn as a last resort if the workplace cannot be made less noisy. The OSHA standard should not be exceeded. Personnel should not be exposed to more than 90 decibels of noise over an 8-hour day. Contact EHS for an evaluation of noise levels and for help in reducing noise in the workplace.

Respiratory Protection: Engineering controls will be used to achieve compliance with all respiratory protection standards. Respirators shall be used only as a last resort, for additional protection, or in emergency response situations. The wearing of respirators for protection against hazardous materials must be coordinated through the EHS Department, in adherence to the CSM Respiratory Protection Program. Dust masks may be worn for protection against large particles of non-toxic materials, not in the presence of hazardous materials.