

California State University, Bakersfield
Personal Protective Equipment Program



CALIFORNIA STATE UNIVERSITY
BAKERSFIELD
Safety and Risk Management

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INTRODUCTION

The objective of the Personal Protective Equipment (PPE) Program is to protect employees from the risk of injury by creating a barrier against workplace hazards. Personal protective equipment is not a substitute for good engineering, administrative procedures or work practices, but should be used in conjunction with these controls to ensure the safety and health of employees. Personal protective equipment or a purchase allowance will be provided when it has been determined that its use will lessen the likelihood of occupational injury and/or illness.

SCOPE

This program addresses the CAL OSHA eye, face, head, foot, and hand protection requirements of 8 CCR 3380 - 3385, 5162. Separate programs exist for respiratory and hearing protection.

RESPONSIBILITIES

Supervisory Personnel

Supervisors have the primary responsibility for implementation of the PPE Program in their work areas including:

- a) Providing appropriate PPE and making it available to employees;
- b) Ensuring employees are trained on the proper use, care and cleaning of PPE;
- c) Maintaining records on PPE assignment (form attached);
- d) Supervising staff to ensure that the PPE program elements are followed and that employees properly use and care for PPE;
- e) Ensuring that defective or damaged equipment is immediately replaced; and,
- f) Notifying the Office of Safety and Risk Management when new hazards are introduced or when processes are added or changed.

Office of Safety and Risk Management (S&R)

S&R staff are responsible for the development and administration of the PPE Program including:

- a) Conducting initial and periodic workplace hazard assessments to identify the presence of hazards which necessitate the use of PPE;
- b) Maintaining records of hazard assessments;
- c) Providing training and technical assistance to supervisors on the proper use, care, and cleaning of approved PPE;
- d) Providing guidance to supervisors regarding equipment selection; and,
Reviewing, updating and evaluating the overall effectiveness of the PPE program

Employees

The PPE user is responsible for following the requirements of the PPE Program. This involves:

- a) Attending required training sessions and complying with all applicable safety requirements;
- b) Wearing and maintaining PPE as instructed;
- c) Informing their supervisor of the need to repair or replace PPE; and,
- d) Asking questions of their supervisor when there is a concern about an unknown or hazardous situation.

EQUIPMENT SPECIFICATIONS

Protective clothing and equipment must conform to National Institute of Occupational Safety and Health specifications and the following American National Standards Institute (ANSI) standards which have been incorporated into the OSHA regulations.

- a) Eye and Face Protection - ANSI Z87.1-1989
- b) Head Protection - ANSI Z89.1-1986, Class A or B Protective Headwear for Industrial Workers or ANSI Z89.2 for electrical work above 600 volts
- c) Foot Protection - ANSI Z41-1991
- d) Hand Protection - There are no ANSI standards for gloves, however, selection must be based on the performance characteristics of the glove in relation to the tasks to be completed.
- e) Emergency Eyewash / Shower Facilities - ANSI Z358.1 -1981

To assure that equipment will be comfortable and used, care must be taken to select the right size.

EYE AND FACE PROTECTION

Prevention of eye injuries requires that all persons who enter eye hazard areas wear protective eye wear. This includes employees, visitors, researchers, contractors or others passing through an identified eye hazard area. Supervisors should stock a sufficient quantity of safety goggles and glasses to provide eye protection for visitors. Eye hazard areas should be posted with signs. Persons who wear prescription glasses must be provided with eye protection that fits over their glasses without disturbing the proper position of the

prescription lenses or the protective lenses. It is especially important for

wearers of contact lenses to use eye and face protection devices in a hazardous environment.

Appropriate eye and face protection shall be used when employees are exposed to hazards from flying particles, molten metal, acids or caustic liquids, chemical liquids, gases, or vapors, bioaerosols, or potentially injurious light radiation. Following are descriptions of the most common types of eye and face protection and the types of hazards they can guard against.

Safety Glasses - Protective eyeglasses are made with safety frames, tempered glass or plastic lenses. Covered temples and side shields provide eye protection from moderate impact and flying particles. Side protectors must be used when there is a hazard from flying objects.

Goggles - Vinyl framed goggles are available with directly, indirectly or non-vented frames. Indirectly vented goggles should be used when there is a hazard from chemical splash. Non-vented frames should be used to protect from hazardous gases and vapors. Goggles may be worn in combination with corrective lenses to insure protection along with proper vision.

Face Shields - Face shields are available in various sizes, tensile strength, impact and heat resistance and light ray filtering capacity. Face shields should be used in operations when the entire face needs protection and should be worn to protect the skin, mouth and nose. Face shields cannot be used as a substitute for safety glasses or goggles.

Welders/Chippers Goggles - Welders goggles provide protection from sparking, scaling or splashing metals and harmful light rays. Lenses are impact resistant and are available in graduated shades of filtration. Chippers/Grinders goggles provide eye protection from flying particles. Refer to 8 CCR 3382, Table EP-1 for guidance in selecting protection against radiant energy.

Welding Shields - Use welding face shields to protect workers' eyes and face from infrared or radiant light burns, flying sparks, metal spatter and slag chips encountered during welding, brazing, soldering, resistance welding, bare₃ or shielded electric arc welding

and oxyacetylene welding and cutting operations.

Laser Protection - Laser safety goggles must be specific to the wavelength of the laser and be of optical density adequate for the energy involved. All protective goggles shall be labeled with the wavelength and optical density for intended use and the visible light transmission. Refer to 8 CCR 3882, Table EP-2 for laser safety glass selection guidelines.

HEAD PROTECTION

Employees exposed to flying or falling objects and/or electric shock and burns shall be safeguarded by means of approved head protection. The shell of the protective hat is hard enough to resist the blow and the headband and crown straps keep the shell away from the wearer's skull. Bump caps/skull guards can be issued and worn for protection against scalp lacerations from contact with sharp objects. However, bump caps cannot be worn as substitutes for safety hats because they do not afford protection from high impact forces or penetration by falling objects.

Head protection will be furnished to, and used by, all employees engaged in construction and other miscellaneous work. Head protection must also be worn by engineers, inspectors and visitors at sites where hazards from falling or fixed objects or electrical shock are present. Where there is a risk of injury from hair entanglement in moving parts of machinery or contamination from combustible or toxic materials, employees shall confine their hair to eliminate the hazard. Following is a description of the different types of protective hats.

Type 1 - Helmet with a full brim.

Type 2 - Brimless helmet with a peak extending forward from the crown.

Class A - Reduces force from impact from falling objects and danger of contact with low voltage conductors.

Class B - Reduces force from impact from falling objects and danger of contact with high voltage conductors.

FOOT PROTECTION

Appropriate foot protection shall be required for employees who are exposed to: electrical hazards; hot, corrosive, poisonous substances; falling objects; crushing or penetrating actions; or, abnormally wet environments. Safety shoes have an impact resistant toe and insoles to protect against puncture wounds. Safety boots offer more protection when splash hazards (chemicals, molten materials) are present. When working with corrosives, caustics, cutting oils, or petroleum products, neoprene or nitrile boots are often required to prevent penetration. Do not tuck pant legs into boots when working with chemicals or hot liquids, because it can funnel hazardous liquids into the boot. Nonskid shoes will be worn where floors are wet or greasy.

Electrical hazard safety shoes are not designed to be a replacement for electrically rated matting in high voltage situations. Electrical safety shoes are to be used when working on low voltage circuits and as a secondary means of protection. Footwear that meets established safety standards will have an American National Standards Institute (ANSI) label inside each shoe. There are many types and styles of protective footwear and it is possible that a particular job may special protection. Footwear which is inappropriate to the extent that its ordinary use creates the possibility of foot injuries shall not be worn.

HAND PROTECTION

Hand protection shall be used when work involves unusual and excessive exposure to: cuts; burns; harmful physical, chemical or biological materials; or, extreme temperatures. Glove selection shall be based on performance characteristics of the gloves, conditions, duration of use and hazards present. One type of glove will NOT work in all situations.

Always read instructions and warnings on chemical container labels and material safety data sheets before handling any chemical. Recommended glove types are often listed in the section for personal protective equipment. All glove materials are eventually permeated by chemicals. Gloves must be replaced periodically, depending on frequency of use and permeability to the substance(s) handled. Safety and Risk Management and

Science Stockroom staff can assist in determining the specific type of glove material that should be worn to protect against a particular chemical. Contaminated gloves should be carefully removed after use to avoid skin contamination.

Power tools and machinery must have guards installed or incorporated into their design that prevent the hands from contacting the point of operation, power train, or other moving parts. To protect hands from injury from contact with moving parts, it is important to ensure that guards are always in place and used. Treat a machine without a guard as inoperative. Always lock-out machines or tools and disconnect the power before making repairs. Do not wear gloves around moving machinery, such as drill presses, mills, lathes, and grinders.

BODY PROTECTION

Body protection, such as aprons or chaps, may be required for employees whose work exposes parts of their body to hazardous substances, equipment or flying objects.

Clothing appropriate for the work being done must be worn. Loose sleeves, shirt tails, ties, lapels, cuffs, other loose clothing or unrestrained hair which can be entangled in moving machinery or materials should not be worn.

PPE MAINTENANCE

All PPE must be kept clean and properly maintained. Cleaning is particularly important for eye and face protection because dirty or fogged lenses can impair vision. PPE should be inspected, cleaned and maintained at regular intervals so that the equipment continues to provide protection. Personal protective equipment shall not be shared between employees until it has been properly cleaned and sanitized. PPE will be distributed for individual use whenever possible. Contaminated PPE must be disposed of in a manner that protects employees from exposure to hazards and complies with hazardous waste regulations. Contact S&R for assistance with disposal.

EMERGENCY EYEWASH / SHOWER FACILITIES

Emergency eyewash facilities must be provided in all areas where

the eyes of an employee may be exposed to corrosive materials or substances which are toxic by absorption. An emergency shower must be provided at all work areas where, during routine operations or foreseeable emergencies, areas of the body may come into contact with a substance which is corrosive or severely irritating to the skin or which is toxic by skin absorption. If both an eyewash and shower are required, they shall be located so that both can be used at the same time by one person. All such emergency facilities must be located within 10 seconds of foot travel by an injured person and be kept free of items which obstruct their use. Plumbed eyewash and shower equipment shall be activated at least monthly to flush the line and verify proper operation. Other units shall be maintained in accordance with the manufacturer's instructions.

TRAINING

Any worker required to wear PPE shall receive training in the proper use and care of the equipment issued. Periodic refresher training shall be offered by S&R to both the employees and the supervisors. The training shall include, but not necessarily be limited to, the following subjects:

- a) What PPE is necessary;
- b) When it is necessary to wear it;
- c) How to properly don, doff, adjust and wear PPE;
- d) The limitations of the PPE; and,
- e) The proper care, maintenance, useful life and disposal of the PPE.

RECORD KEEPING

Written records shall be kept of the names of persons trained, the type of training provided, and the dates when training occurred. S&R will maintain hazard assessment forms and employee training records for at least 3 years.

SELECTION AND USE OF PPE IN LABORATORIES

Refer to Chemical Hygiene and Biological Safety Plans for additional information about use of PPE in laboratories.



Head Protection

Hazards to consider include:

- Suspended loads that could fall
- Overhead beams or loads
- Energized wires or equipment
- Other employees working overhead
- Sharp objects or corners at head level

Hazards Identified: _____

Hard Hat: Yes No

If yes, type:

- Type A (impact and penetration resistance, plus low-voltage electrical insulation)
- Type B (impact and penetration resistance, plus high-voltage electrical insulation)
- Type C (impact and penetration resistance)

Eye and Face Protection

Hazards to consider include:

- Chemical splashes
- Dust
- Smoke and fumes

If Yes, type: Gloves: Yes No

A. Chemical resistant B. Temperature resistant
 C. Abrasion resistant D. Other (Explain)

Foot Hazards

Hazards to consider include:

- Heavy materials handling
- Sharp edges or points
- Exposed electrical wires
- Unusually slippery conditions
- Wet conditions
- Construction/demolition

Hazards Identified: _____ _____ _____

Safety shoes: Yes No

If Yes, type(s):	
A. Toe protection	B. Puncture resistant
C. Electrical insulation	D. Metatarsal protection

- Welding operations
- Lasers/optical radiation
- Bioaerosols
- Projectiles
- Cutting / grinding / power actuated tool use

Hazards Identified: _____ _____ _____

Safety glasses or goggles	Yes	No
Face shield	Yes	No

Hand Hazards

Hazards to consider include:

- Chemicals
- Sharp edges, splinters, etc.
- Temperature extremes
- Biological agents
- Exposed electrical wires
- Sharp tools, machine parts, etc.
- Material handling

E. Other Safety Shoes (Explain):

Hazards Identified: _____

Other Safety and/or Health Hazards:

Hazard:	Recommended Protection:
_____	_____
_____	_____
_____	_____