

Area of protection	Hazards	Types of PPE for selection
Foot and leg	Wet floors and slips; cuts, bumps and punctures; falling objects; splashing of chemicals or molten metals; abrasion	Safety boots or safety shoes, water-proof boots with steel toe caps, steel soles and slip-proof characteristics 
Hearing	High levels of noise leading to tinnitus; temporary deafness; permanent hearing loss; dizziness and headache	Hearing protective equipment (including ear muffs and ear plugs) 
Fall protection	Injury or death caused by falling from height	Safety harnesses (to be used with lifelines or attached to anchorage points) 

Responsibilities

Employers have duties on guidance, training and supervision with respect to use of PPE. They should ensure that their employees know why and when PPE is used, its maintenance or replacement schedule and limitations. They should regularly monitor proper use of PPE and thoroughly investigate causes of any non-compliance in using PPE. In hazardous workplaces, signs should be posted to remind workers to use PPE.

Employees must wear PPE for the entire period of exposure to hazards. Do not put your PPE away just because the work lasts for only "a few minutes". If any defect on PPE is found, report it to the employer immediately and replace it.

Maintenance

PPE should be handled with care and stored properly when not in use. Store it in a dry and clean cabinet. If it is a small item, such as an eye protector, keep it in a case or a box. The equipment should be kept clean and maintained in good condition. For this purpose, follow the manufacturer's maintenance schedule (including the suggested replacement schedule and service lifetime). Simple maintenance can be carried out by PPE users who have received training, but more complicated repairs should only be conducted by professionals.

In order to cope with any emergency need, replacement PPE should always be readily available.

Points to Note

Is there any other means (excluding PPE) to control the hazards such as works control measures? If this is not available and PPE is required, it is necessary to conduct a check on the use of PPE:

- ◆ Is sufficient PPE provided for each type of hazard?
- ◆ Regarding the intended use of PPE, can it provide adequate and suitable protection for the workers?
- ◆ Has the user received adequate instruction and training regarding safe use of PPE?
- ◆ Has the PPE properly maintained?
- ◆ Has the PPE cleaned and properly stored after use?

Relevant Legislation

The following legislation stipulates the requirements for the provision and use of PPE:

- ◆ Construction Sites (Safety) Regulations
- ◆ Factories and Industrial Undertakings (Protection of Eyes) Regulations
- ◆ Factories and Industrial Undertakings (Asbestos) Regulation
- ◆ Factories and Industrial Undertakings (Blasting by Abrasives) Special Regulations
- ◆ Factories and Industrial Undertakings (Confined Spaces) Regulation
- ◆ Factories and Industrial Undertakings (Cartridge-Operated Fixing Tools) Regulations
- ◆ Factories and Industrial Undertakings (Dangerous Substances) Regulations
- ◆ Factories and Industrial Undertakings (Noise at Work) Regulation
- ◆ Factories and Industrial Undertakings (Suspended Working Platforms) Regulation
- ◆ Factories and Industrial Undertakings (Dry Batteries) Regulations
- ◆ Factories and Industrial Undertakings (Electrolytic Chromium Process) Regulations

Enquiry

If you wish to enquire about this guide or require advice on occupational safety and health, please call 2559 2297.

Information on the services of the Labour Department and on major labour legislation can also be found by visiting our Home Page on the Internet. Address of our Home Page is <http://www.labour.gov.hk>.

Information on the services offered by the Occupational Safety and Health Council can be obtained through hotline 2739 9000.


Complaints

If you have any complaints about unsafe workplaces and practices, please call the Labour Department's occupational safety and health complaint hotline at 2542 2172. All complaints will be treated in the strictest confidence.

Safety at Work

A Guide to Personal Protective Equipment





Occupational Safety and Health Branch
Labour Department



Occupational Safety & Health Council

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What is Personal Protective Equipment?

Personal protective equipment (PPE) refers to "all equipment (including clothing for inclement weather) which is intended to be worn or otherwise used by a person at work and which protects the person against one or more hazards to his/her safety or health". It includes safety helmets, gloves, eye protectors, respiratory protective equipment, ear protectors, high visibility clothing, safety shoes, safety harnesses, etc.

Provision and Use of PPE

When there is a hazard to personal safety or health at work, it is most important to eliminate the hazard by adopting safety measures like engineering controls, improved work processes and administrative controls. PPE should be used only when these measures cannot control the hazards effectively.

The main purpose of PPE is to protect the body of the user from contact with the hazards, but not to eliminate the hazards. Since the effectiveness of PPE can be easily affected (e.g. by improper wearing), PPE should only be regarded as the last resort in the hierarchy of hazard control measures. It is a supplement to other measures, but not a substitute for them.

When it is necessary to use PPE to safeguard the safety and health of workers, the employer must provide them with suitable PPE and ensure that they use it properly. The workers should also use PPE during their work. Improper use or temporary removal of PPE at work will reduce the protection provided.




Selection of suitable PPE


To select suitable PPE, it is necessary to examine different hazards in the workplace carefully. For the same type of PPE, the degree of protection varies between different models. Therefore, risk assessments have to be carried out to determine which type of PPE is the most suitable one. The selected PPE must conform to internationally recognized standards or the standards stipulated in the legislation for the purpose of ensuring its effectiveness. You can consult safety professionals, PPE suppliers or manufacturers so as to select suitable PPE.

Factors to consider in selecting suitable PPE

- ◆ Can the PPE provide effective protection against the hazards and whether it is suitable for use in the work process? For example, eye protectors designed for metal or rock cutting cannot provide adequate protection for gas welding or flame cutting workers.
- ◆ Can the PPE prevent or reduce the hazards without creating unsafe working conditions? Take, for example, the improper use of half-face masks or cartridge respirators in asbestos removal.
- ◆ Can the PPE be adjusted to fit the user's body properly?
- ◆ Has consideration been given to the health of the user?
- ◆ What are the physical strength requirements of the work? What is the load of PPE imposed on the user? For example, duration of use of the PPE, physical strength required for the work and requirements on communication and visibility.
- ◆ If one or more types of PPE have to be worn, are they compatible? For instance, will the use of a certain type of respirator prevent the user from wearing an eye protector correctly?

PPE

Area of protection	Hazards	Types of PPE for selection
Eye	Splashing of chemicals or metals; dust; projectiles; gas and vapour; radiation	Safety glasses; goggles; face shields 
Head	Impact from falling or flying objects; risk of head bumping in a cramped working environment	Safety helmets; bump caps 
Respiratory system	Dust; fibres; hazardous gases and fumes; oxygen deficiency	Disposable cartridge respirators; full-face/half-face respirators; air-supplied hoods; self-contained respirators 

Area of protection	Hazards	Types of PPE for selection
Torso	Extreme temperatures; inclement weather; splashing of chemicals or molten metals; radiation; injury caused by sharp objects; hazardous dust/fibres; dark environment or personal clothing entangled	General purpose protective clothing; disposable overalls; specialized protective clothing such as cold-resistant clothing; chemical or radiation protective clothing; high visibility clothing and puncture-resistant aprons 
Arm and hand	Abrasion; extreme temperatures; cuts and punctures; contact with chemicals; electric shock; skin infection	Rubber gloves; steel mesh gloves; leather gloves; wrist and arm protective devices 