Hazard 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 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

It is not enough to comply with current legislation regarding PPE. Employers should take additional safety measures. 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.

If you have any questions on the use of PPE, 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.

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

Relevant Legislation

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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 to protect the person against one or more hazards to his/her safety or health.” It includes safety helmets, gloves, eye protection, 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 nationally 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 as to how 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 protection 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?

**Area of protection**

**Hazard**

**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 high objects; risk of head bumping in a cramped working environment
- Safety helmets; bump caps

**Respiratory system**

- Dust; fibres; contamination of gases and fumes; oxygen deficiency
- Disposable cartridge respirators; full-face/half-face respirators; air supplied hoods; self contained respirators

**Arm and hand**

- Abrasion; extreme temperatures; cuts and punctures; contact with chemicals or electric shock; skin infection
- Rubber gloves, steel mesh gloves, leather gloves, wrist and arm protective devices

**Types of PPE for selection**

- General purpose protective clothing; disposable coveralls; specialized protective clothing; skin and eye protection; high visibility clothing and personal protective equipment.