

M4-EN.5 PERSONAL PROTECTIVE EQUIPMENT (PPE)

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Chapter Description M4-EN.5

In this chapter, Personal Protective Equipment is described. This chapter aims at the familiarization of those who are engaged in Occupational Health and Safety with the PPEs used in a workplace and especially in textile industry, resulting in health and safety of the employees.

M4-EN.5.1 Definition of PPE

Every workplace has its own dangers for the health and safety of employees. Those dangers can be found in many points like sharp surfaces, falls, chemical substances, noise etc. The best way for the employees to be protected is to minimize the danger at the source. When this is impossible because of technical or economic problems then the employer should supply his employees with Personal Protective Equipment.

Personal Protective Equipment: Every apparatus that a person should wear or bring to be protected from any danger that threatens his health and safety.

The Personal Protective Equipment includes apparatus, which protect employees from injuries or accidents and minimize the risk of exposure to chemical substances. The PPEs are made to protect:

- The eyes
- Hearing
- The face
- The respiratory system
- The head
- The legs and feet
- The arms and hands
- The whole body

M4-EN.5.2 Personal Protective Equipment

There are many PPEs to mention for instance like, goggle, respirators, helmets, safety shoes, safety gloves, working clothes. The PPEs should fit the special characteristics

of the user. The majority of those PPEs are capable at many sizes so the employee can choose the right for him. Moreover, it is important to take into consideration the compatibility of the different PPEs.

In a Textile Industry, there are many dangers that oblige employer to buy some PPEs for the employees.

M3-EN.4.3 Face and Eyes

Some potential dangers in a textile industry that can cause severe damage to employee's eyes and face are the existence of pendulous particles- particularly cotton fibres at cotton grabbing and yarning. The selected form of eye protection at a workplace must be appropriate to the work being performed and properly fits each worker exposed to the hazard. Employees wearing corrective lenses or contact lenses are not being protected from eye hazards. Therefore, they must use eye protective equipment that incorporates with the prescribed lenses they use. It is important to make sure that the protective eyewear does not disturb the proper positioning of the prescription lenses, and that the employee's vision will not be inhibited or limited.

M4-EN.5.4 Ears

Where noise levels exceed the standards, ear protection must be provided and used. A variety of effective hearing protection exists, so that employers can choose the proper hearing protective equipment. With all these, moving parts at textile industry's machines there is a lot of noise. While noise reduction can be achieved when oiling these moving parts, however it is essential for employees to have and use their personal protective equipment for noise. The choices are:

- Earmuffs, which completely cover the ear
- Earplugs, which are inserted in the ear canal
- Semi-inserts (called 'canal caps'), which cover the entrance to the ear canal

M4-EN.5.5 Respiratory protection

In the textile industry, there is a high concentration of cotton fibres. Therefore, the use of respiratory protection is essential. Respirators protect the user in two main ways. The first is by the removal of contaminants from the air. Respirators of this type include particulate respirators, which filter out airborne particles; and "gas masks" which filter out chemicals and gases. Some other respirators protect by the supply of clean and Respirable air from another source. Respirators that fall into this category include airline respirators, which use compressed air from a remote source; and self-contained breathing apparatus (SCBA), which include their own air supply. Respirators should only be used as a last protective measure when engineering control systems are not sufficient. Engineering control systems, such as adequate ventilation or scrubbing of contaminants should be used to negate the need for respirators.

In some cases like fire there should be respiratory apparatus to help employees to escape the danger and the smoke.

M4-EN.5.6 Body

Personal protective clothing equipment, should be safely designed and constructed, and should be maintained in a clean and reliable fashion. Employees in textile industry may meet a variety of threats for their body and skin. Examples of body protection include laboratory coats, coveralls, vests, jackets, aprons, surgical gowns and full body suits. The protection should be in the form of a single overall that can provide a gas-tight unit. Boots worn must also be sealed to the overall.

M4-EN.5.7 Arms and hands

If a textile industry hazard assessment shows that employees face potential injury to hands and arms that cannot be eliminated through engineering and work practice controls, employers must ensure that employees wear appropriate protection. Potential hazards include skin absorption of harmful substances, chemical or thermal burns, electrical dangers, bruises, abrasions, cuts, punctures, fractures and amputations. Protective equipment includes gloves, finger guards and arm coverings or elbow-length gloves.

A variety of gloves exists for the protection against several hazards. The way gloves will be selected, depends on the type of the hazard and the operation involved.

Gloves:

- Against physical impacts
- Against chemical impacts
- For electrical dangers
- For protection from heat

M4-EN.5.8 Legs and feet

When employees might face possible foot or leg injury, then protective footwear should be used. Injuries might occur as a result from falling or rolling objects, or from crushing or penetrating materials.

Some examples of situations in which an employee should wear foot and/or leg protection are among others:

- When heavy objects (barrels or tools) might roll onto or fall on the employee's feet
- Working on or around hot, wet or slippery surfaces
- Working when electrical hazards are present

There are also “special purpose shoes”; such as electrically conductive shoes that provide protection against the build-up of static electricity; and foundry shoes that keep the isolate the feet from the extreme heat of molten metal, and keep hot metal from lodging in shoe eyelets, tongues or other shoe parts. As with all protective equipment, safety footwear should be inspected prior to each use.