

M2-EN.8 MEANS OF PERSONAL PROTECTION

M2-EN.8.1 Introduction - means of Personal Protection

M2-EN.8.2 Helmets, Hearing Protectors and Safety Spectacles

M2-EN.8.3 Breathing Masks

M2-EN.8.4 Rappelling and Protection against Falling

M2-EN.8.5 Protection of Skin

M2-EN.8.6 Protective Clothes



M2-EN.8.1 Introduction - Means of Personal Protection

If the job cannot be planned, organized or carried out ensuring safety and health, it must be done only if the worker uses means of personal protection. Using personal protective equipment must be the last possible solution.

Personal Protective Equipment must:

- always protect as they were meant to do
- not cause inconvenience
- be carefully selected
- be properly maintained and cleaned
- be fitted to use under the conditions at the place of work

Personal Protective Equipment must have manufacturer's instructions, which contain information on their use, cleaning, maintenance and storing. It must furthermore state the limitations of the means.

The employer is responsible to:

- provide and pay for workers' personal protective equipment
- ensure that the personal protective equipment is used during the whole working period and that it is used in conformity with its design and purpose

The employees are obligated to use the means of personal protection that are given to them with the instructions on how to use them. They must notify their supervisor if their means of personal protection are defective.

M2-EN.8.2 Helmets, Hearing Protectors and Safety Spectacles

Workers must always wear protective helmets when working or staying in places where the head is at risk, and where mandatory signs exist. The choice of helmet must be based on the working situations where the helmet must be worn. There might be reasons to choose a helmet in specific colours or shapes, so that e.g. a ground assistant is particularly visible to the crane driver.

Hearing protection must be used from the beginning if the noise assessment indicated damage to hearing because of work. Hearing protection is only effective if used correctly and consistently. Even when removed briefly in surroundings with noise, the protection is considerably reduced.

Safety spectacles must always be used when working or staying in places where there is a risk of being hit by flying particles, sprays from corroding gasses or steam, or harmful radiation.

If you use glasses the safety spectacles must be large enough to embrace the glasses – otherwise you must use safety spectacles with corrective lenses.

Workers must always use the personal protective equipment according to instructions and discard worn out or defect means. Helmets must be discarded if they have been subject to blows or crushing.

M2-EN.8.3 Breathing Masks

Breathing masks provide protection against polluted air or lack of oxygen. There is a distinction between filtering breathing masks and air supplying breathing masks. Filtering breathing masks may be chosen when air-supplying masks are not necessary. Employers must be careful to choose a breathing mask with the right type of filter.

Characteristics of filtering breathing masks:

- they are easy to use and with only relatively little inconvenience
- the protection can be limited
- they should be used the most for three hours a day

Air supplying breathing masks must be used when the filtering mask does not protect effectively. Air supplying breathing masks must always be chosen when:

- there is a risk of lack of oxygen

- there is high concentration of air pollution
- the type of air pollution is not known
- no suitable filters are available
- filtering masks do not fit tightly enough
- when the use of breathing masks is needed for more than three hours

Breathing masks must be used in conformity with the manufacturer's instructions and their filters must be changed regularly. The areas where breathing masks must be used should be clearly marked.

M2-EN.8.4 Rappelling and Protection against Falling

If the work involves a risk of falling, then equipment for protection against falls must be used. The use of such equipment is therefore an emergency solution. If there is a danger of falling, the work place will normally be secured by hand rails, scaffoldings, lifts, etc.

Workers must ensure that:

- prior every use the equipment is undamaged and without defects on the wires, cracks, attrition or other kind of damage. In case of defected equipment, the damage must be repaired or discard the equipment if the repair does not make it completely functional. A regular examination must be done according to manufacturer's instructions
- The equipment is chosen to fit the task and be used in accordance with manufacturer's instructions
- the anchorage is able to stand the weight of a falling person and is of the required height. The anchorage must lie above the secured person and not too far out in order to reduce the length of the fall to a minimum
- the areas where equipment for protection against fall must be used are clearly marked

There are specific rules concerning rappelling. Employees doing rappelling must have a special adequate training in carrying out the task, especially in the relevant rescue procedures.

M2-EN.8.5 Protection of Skin

The skin protects the human being against physical, chemical and biological impacts. Tears on the skin or direct contact with hazardous materials may cause irritated or allergic contact dermatitis.

Risk Factors

- acid, bases, solvents, cleaning articles or cutting oil can cause contact dermatitis
- perfume, chromate, epoxy, preservatives or nickel can cause skin allergies
- cold, heat or contact with solvents can cause drying, decomposition or degreasing of the skin

- when latex gloves are used, sweat is generated
- risk of penetration of hazardous materials exist

Safety Measures

- Avoid using irritating and allergenic matters or possible contact with hazardous materials
- Use suitable safety gloves when necessary. Cotton gloves may absorb humidity from the skin and protect against decomposition
- Workers should not clean their hands with stronger means than necessary

M2-EN.8.6 Protective Clothes

Protective clothes imply suit, apron, arm protector, waistcoat, shoes etc. that are suitable to protect against different kinds of impact. They may protect the whole body or just part of it. The type of protective clothing depends on the working process or the dangerous impacts.

Reinforced shoes with a steel cap must be used where there is a risk of crushing or injuries because of falling objects. Reinforced shoes with a protective sole must be used where there is a risk of stepping on sharp objects like nails or broken glass. A reinforced shoe with both the steel cap and the protective sole must normally be used in the construction sector.

Special attention:

- Chemicals will eventually penetrate the protective clothing. The clothing must be discarded when it does not provide the necessary protection anymore
- When using a power chain saw, workers must wear trousers with cut obstructing insets
- When working in cold or heat thermal clothes may be practical, but suits made of metallised woven textiles provide good protection against heat radiation
- When choosing the type of reinforced shoes, the characteristics of the floor must be taken into consideration, as well and the fact that the work will be carried out while walking or standing. The shoe must fit tightly and in a proper way

Workers must remember that:

- there might be several types of impact at the same time
- the protective clothes actually do afford the necessary protection
- the clothes must be checked if they are intact