

# COMMISSION OF THE EUROPEAN COMMUNITIES

COM(88) 76 final

Brussels, 7 March 1988

Proposal for a  
COUNCIL DIRECTIVE

concerning the minimum health and safety requirements for the use by  
workers of personal protective equipment

(third individual Directive within the meaning of Article 13  
of Directive ...) (1)

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(presented by the Commission)

(1) COM(88) 73 final

## EXPLANATORY MEMORANDUM

### 1. Legal basis

The proposal is based on Article 118A of the EEC Treaty.

It falls within the framework of the Communication from the Commission on its programme concerning safety, hygiene and health at work <sup>1)</sup>.

The proposal is also linked to the Directive drawn up on the basis of Article 100A, aiming at the completion of the internal market <sup>2)</sup> through the elimination of technical barriers to trade in implementation of the new approach <sup>3)</sup>.

### 2. Aims of the proposal

The proposal has a two-fold objective:

- the improvement of the safety and health of workers at work through the adequate use of personal protective equipment;
- the introduction of a social element in relation to the Directive which aims at the completion of the internal market for personal protective equipment;

1) COM (87) 520 - Council Resolution 88/C28/01 of 21.12.1987, OJ C 28 of 3.2.1988

2) Commission White Paper on the completion of the internal market (Ref. COM 85 (310) final)

3) Council Resolution of 7.5.1985 - OJ C 136 of 4.6.1985

The proposal is designed to improve the safety and health of workers by establishing minimum requirements with a view to ensuring the selection of personal protective equipment most appropriate to the risks present and improving the conditions in which such equipment is used.

The proposal accords first priority to collective means of protection (technical or organizational means), regarding personal protective equipment as a "second line of defence" in the protection of safety and health at work. In many undertakings there are numerous circumstances where, for either technical or economic reasons, or both, the risks to safety and health are not overcome, or are not sufficiently overcome, by collective means of protection; in such cases, personal protective equipment must be used instead of or in addition to collective means to provide greater protection for workers.

Using unsuitable personal protective equipment can be as least as dangerous as not using protective equipment at all, since the worker, believing himself to be protected when in fact he is not, will take less care than he would otherwise. For this reason, the proposal aims to ensure that only the personal protective equipment best suited to the risks present in the undertakings is selected.

The proposal also aims to ensure that the personal protective equipment chosen is suitable from not only a technical but also a human point of view; the cooperation of the workers is essential to the effectiveness of this equipment.

The Directive aiming at the completion of the internal market through the elimination of technical barriers to trade in personal protective equipment is based on the new approach, which provides for essential safety requirements (to be specified in harmonized European standards); this Directive concerns the design, manufacture or construction of new products and provides for the placing on the market and free movement of such products. The proposal introduces a social element into this Directive.

In drawing up this proposal the Commission has taken account of the specific nature of SMUs. To this end the proposal provides that the application of the provisions of the Directive may be modulated to take account of the size of the undertaking and "socio-economic factors". Member States should apply the same principles when implementing the provisions of the Directive at national level.

3. The proposal in relation to existing national legislation

In most Member States there are general requirements that employers should provide workers with personal protective equipment if the dangers posed by the workplace cannot be avoided by technical measures. Workers are also required to use the equipment provided and employers are required to ensure that it is cleaned and properly maintained. In many Member States, there are specific requirements for certain activities.

4. The proposal in relation to existing Community legislation

The proposal, which governs the use of personal protective equipment in general, enables the individual Directives within the meaning of Directive 80/1107/EEC on the protection of workers from the risks related to exposure to chemical, physical and biological agents to be restricted, in terms of personal protection, to the specific agents concerned.

5. Characteristics of the proposal

As provided for in Article 118A of the Treaty, the proposal contains essential minimum safety requirements, with regard to Member States and employers, for the use of personal protective equipment; these are expressed in global terms and details concerning implementation are left to national legislations.

The proposal does not accord favourable treatment to small and medium-sized undertakings, since to do so might deprive workers in these undertakings of essential protection. Personal protective equipment is used in the presence of risks; its use bears no relation to the size of the undertaking. Furthermore, it is generally acknowledged that small- and medium-sized undertakings, which often do not have as much (expensive) collective equipment as larger undertakings, are often the least safe.

## 6. Consultation of the parties concerned

The proposal was the subject of detailed consultation with the Advisory Committee for Safety, Hygiene and Health Protection at Work (set up by Council Decision 74/325/EEC) of 27.6.1974, OJ L 185 of 9.7.1974) which gave an opinion which was taken into account in the drafting of the proposal.

## 7. Comments on the Articles of the proposal

- Article 1 outlines the scope of the Directive.
- Article 2 defines the scope, by means of definitions and exclusions; Annex II provides a non-exhaustive list, for guidance, of personal protective equipment covered by the Directive.
- Article 3 establishes a relationship between personal protective equipment and collective means of protection.
- Article 4 indicates the link between personal protective equipment and the risks, the work, the workers and the information available.

Article 5 provides for a procedure for the assessment of personal protective equipment to be followed by the employer, with a view to ensuring that the personal protective equipment most appropriate to the risks present in the undertaking is chosen; the annexes provide guidelines, which are meant as an aid and are not compulsory or binding, for carrying out the assessment.

- Article 6 lays down the obligation for the Member States to establish regulations as a framework for the use of personal protective equipment; the annexes provide guidelines for the Member States (as for the employer, in Article 5).

- Article 7 stipulates that employers should involve workers or their representatives in planning the use of personal protective equipment, with a view to ensuring that such equipment is more effective on a human level.
- Article 8 provides for a procedure for the adaptation of the annexes.
- Articles 9 and 10 contain the final provisions and refer in particular to the need for the Member States to make a periodic report.

Proposal for

a

Council Directive  
concerning the minimum requirements for the use  
by workers of personal protective equipment at work  
(third individual Directive within the meaning of  
Article 13 of Directive .....)

THE COUNCIL OF THE EUROPEAN COMMUNITIES

Having regard to the Treaty establishing the European Economic Community, with particular reference to Article 118A,

Having regard to the Commission proposal<sup>1</sup>, drawn up after consultation with the Advisory Committee for Safety, Hygiene and Health Protection at Work<sup>2</sup>,

Having regard to the opinion of the Economic and Social Committee<sup>3</sup>,

In cooperation with the European Parliament<sup>4</sup>,

Whereas Article 118A of the EEC Treaty provides that the Council shall issue directives containing minimum requirements designed to encourage improvements, especially in the working environment, to promote the health and safety of workers;

Whereas Article 118A also recommends that directives shall avoid imposing administrative, financial and legal constraints which could hold back the creation and development of SMUs;

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1 OJ .....

2 Council Decision 74/325/EEC of 27.6.1974

3 OJ .....

4 OJ .....

Whereas the Communication from the Commission on its programme concerning safety, hygiene and health at work<sup>5</sup> provides for the adoption of directives designed to guarantee the safety and health of workers;

Whereas the Council Resolution of 21 December 1987<sup>6</sup> concerning safety, hygiene and health at work noted the Commission's intention to present to it in the near future minimum requirements concerning the safety and health of workers at work;

Whereas the completion of the internal market entails the drawing up of a directive based on Article 100A, in accordance with the new approach to harmonization and standardization<sup>7</sup>, making compliance with essential safety requirements for the design, manufacture or construction of personal protective equipment a condition for the placing on the market and free movement throughout the Community of such equipment;

Whereas it is necessary to supplement this Directive, which only refers to the placing of personal protection equipment on the Community market, by minimum safety and health requirements for the use of personal protective equipment;

Whereas this Directive introduces a social element in relation to a technical harmonization Directive aiming at the completion of the internal market for personal protective equipment;

Whereas collective means of protection shall be accorded priority over individual protective equipment;

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<sup>5</sup> COM (87) 520 and Council Resolution 88/C 28/1 of 21.12.1987, OJ C 28 of 3.2.1988

<sup>6</sup> 88/C 28/01, OJ C 28 of 3.2.1988

<sup>7</sup> White paper - COM 85(310 final)



whereas the use of personal protective equipment presupposes that workers are in situations which pose a risk to their safety and health and that it is important, in such a situation, to encourage the involvement of the worker in all aspects of the use of personal protective equipment;

Whereas this Directive lays down essential minimum requirements to protect the safety and health of workers, without impeding the retention or institution by each Member State of more stringent measures to protect working conditions;

Whereas these requirements should not entail alterations to personal protective equipment whose design and manufacture were covered by Community Directives relating to safety and health at work,

Whereas it is important to promote the cooperation of both sides of industry in decisions and activities relating to the protection of safety and health at the workplace, at all levels;

Whereas a Committee should be set up within the Commission to assist the Commission in the implementation of additional measures provided for by the Directive;

HAS ADOPTED THIS DIRECTIVE:

OBJECT

Article 1

The object of this Directive, which is an individual Directive within the meaning of Article 13 of Directive ..... (X), is the protection of workers against the risks to their safety and health at work where such risks cannot be avoided or sufficiently overcome by collective means of protection or by organizational measures, methods or procedures.

DEFINITIONS

Article 2

1. This Directive applies to personal protective equipment used at work. It lays down supplementary provisions for this type of equipment to those given in Council Directive ... concerning the assimilation of Member States' legislation on personal protective equipment.
2. For the purposes of this Directive, the following terms have the meanings hereby assigned to them:

- workplace

any place to which the worker has access in the undertaking and/or establishment;

- worker

any person who performs work in some form, including students undergoing training and apprentices;

- undertaking and/or establishment

a public-sector or private-sector body engaging in particular in industrial, agricultural, commercial, administrative, service, educational or cultural activities;

- employer

the body or person in charge of the undertaking and/or enterprise;

- personal protective equipment

all equipment designed to be worn or held by the worker to protect him against one or more hazards liable to endanger his safety and health at work. Annex B to Annex III contains a non-exhaustive list, as a guideline, of personal protective equipment covered by this definition.

The following are also considered to be personal protective equipment:

- an assembly of several integrally-linked devices or means designed to protect the worker against one or more risks liable to be encountered simultaneously,
- a device or means of protection attached, whether permanently or not, to an item of personal non-protective equipment worn or held by the worker in order to perform an activity,
- interchangeable components of an item of personal protective equipment which are essential for its efficient functioning.

Any linking system to connect personal protective equipment to an outside device, even when this linking system is not designed to be worn or held permanently by the worker during exposure to the risk or risks.

The definition excludes:

- ordinary working clothes and uniforms not specifically designed to protect the safety and health of the worker
- equipment used by emergency and rescue services
- personal protective equipment worn or used by the military, the police and other public order agencies

- means of private transport and related equipment
- sports equipment
- self-defence or deterrent equipment
- portable devices for detecting and signalling risks and nuisances.

Annex II contains a non-exhaustive list, as a guideline, of personal protective equipment covered by this definition.

#### GENERAL PROVISIONS

##### Article 3

Personal protective equipment shall be used when the risks cannot be avoided, or adequately overcome by the other means indicated in Article 1.

##### Article 4

1 Personal protective equipment should:

- be appropriate for the risks involved
- be adapted or adaptable to the individual worker
- correspond to the conditions at the workplace
- take account of ergonomic requirements
- take account of the worker's state of health
- if possible, incorporate corrective elements required by the user.

2 Where the presence of more than one risk makes it necessary for a worker to wear more than one item of personal protective equipment, such equipment must be compatible and continue to be effective against each risk.

- 3 The conditions of use of personal protective equipment, in particular the period for which it is worn, shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk and the characteristics of the workstation of each worker.
- 4 Personal protective equipment is, in principle, intended for personal use. If the circumstances permit personal protective equipment to be worn by more than one person, appropriate measures shall be taken to ensure that this does not create any health or hygiene problem for the different users.
- 5 Adequate information on each item of personal protective equipment, required under paragraphs 1 and 2, shall be provided and made available within the undertaking.
- 6 Personal protective equipment shall normally be provided free of charge by the employer, who shall ensure that they are kept clean and in good working order, by carrying out the necessary maintenance, repair and replacements.

#### ASSESSMENT OF PERSONAL PROTECTIVE EQUIPMENT

##### Article 5

- 1 When choosing personal protective equipment, the employer is required to assess whether the equipment he intends to use satisfies the requirements of Article 4, paragraphs 1 and 2.

This assessment shall involve:

- a) analysis of risks which cannot be avoided by other means. Annex I comprises a chart, as a guideline, for this analysis;
- b) the definition of the characteristics which personal protective equipment must have in order to be effective against the risks referred to in a) above, taking into account any risks which this equipment itself may create;

- c) comparison of the characteristics of the personal protective equipment available with the characteristics referred to in b). Annex II gives guidelines on the existence of personal protective equipment. Annex III gives non-exhaustive guidelines for an assessment of certain types of personal protective equipment.
- 2 The assessment provided for in paragraph 1 shall be repeated if any changes are made to any of its elements.

#### REGULATIONS FOR USE

##### Article 6

- 1 Notwithstanding the provisions of Articles 3, 4 and 5, the Member States shall establish regulations to constitute a framework for the use of personal protective equipment, taking account of Community legislation on the free movement of such equipment.

These regulations shall indicate in particular the circumstances, activities or sectors of activity in which the use of personal protective equipment is required.

Member States shall take account of Annexes I, II, III and IV when establishing such regulations.

2. The Member States shall adapt the regulations referred to in paragraph 1 to take account of any significant changes to the risk, collective means of protection and personal protective equipment, brought about by technological developments.
- 3 The Member States shall consult management and workers before establishing the regulations referred to in paragraphs 1 and 2.

#### COLLABORATION BETWEEN THE SOCIAL PARTNERS

##### Article 7

- 1 The employer is required to involve the workers and/or their representatives in the undertaking or establishment in the drawing up and/or implementation of:

- . the policy for personal protection in the undertaking;
  - . the principle for use established in Article 3;
  - . the conditions for use described in Article 4, paragraphs 3, 4, 5 and 6;
  - . the assessment procedure described in Article 5;
  - . the choice of types of personal protective equipment;
  - . measures to be taken to reduce the constraints which the wearing of certain items of personal protective equipment can involve for the worker;
  - . measures to be introduced to ensure that personal protective equipment is correctly used by workers, in particular the provision of information and, if necessary, adequate training;
  - . measures to be taken to avoid any risks which may result from the use of certain items of personal protective equipment.
- 2 The provisions set out in paragraph 1 do not affect the employer's responsibility.
- 3 The authority responsible for safety and health at work shall take the necessary measures to encourage the implementation and application of paragraph 1 in the undertaking.

#### Article 8

- 1 Annexes I, II, III and IV shall be changed as a result of:
- the adoption of technical harmonization and standardization directives relating to the design and manufacture of personal protective equipment
  - technical progress and changes in international regulations and specifications or knowledge in the field of personal protective equipment.

2. The Commission shall be assisted in making the changes referred to in paragraph 1 by a Committee using the procedure set out in Article 14 of Directive .....

#### Article 9

- 1 Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 1.7.1990 at the latest and shall immediately inform the Commission thereof.
- 2 Member States shall communicate to the Commission the text of the national provisions which they adopt in the field covered by this Directive. The Commission shall inform the other Member States thereof.
- 3 Member States shall report to the Commission every two years on the practical implementation of the provisions of this Directive in undertakings, indicating the points of view of employers and workers.

#### Article 10

This Directive is addressed to the Member States.

Done at Brussels,

For the Council,  
The President



ANNEX I

Specimen risk analysis table for the use of personal protective equipment

RISKS	PARTS OF THE BODY	PHYSICAL										CHEMICAL					BIOLOGICAL										
		MECHANICAL				THERMAL		ELECTRICAL		RADIATION		NOISE		AEROSOLS		LIQUIDS		GASES, VAPOURS				Harmful bacteria	Harmful viruses	Mycotic fungi	Non-microbe biological antigens		
		Falls from a height	Blows, cuts, impact, crushing	Stabs, cuts, grazes	Vibration	Slipping, falling over	Heat, fire	Cold			Non-ionizing	Ionizing		Dust, fibres	Fumes	Vapours	Immersion	Splashes, spurts									
HEAD	Cranium																										
	Ears																										
	Eyes																										
	Respiratory tract																										
	Face																										
	Whole head																										
UPPER LIMBS	Hands																										
	Arms (parts)																										
LOWER LIMBS	Foot																										
	Legs (parts)																										
VARIOUS	Skin																										
	Trunk / abdomen																										
	Parenteral passages																										
	Whole body																										

NON-EXHAUSTIVE LIST

OF ITEMS OF PERSONAL PROTECTIVE EQUIPMENT

covered by the definition in Article 2

HEAD PROTECTION

- Protective helmets for use in industry (mines, building sites, other industrial uses)
- Protective headgear (bonnets, caps, souwesters, etc. in fabric, fabric with proofing, etc.)
- Scalp protection (caps, bonnets, hairnets - with or without eye shade)

HEARING PROTECTION

- Earplugs and other ear plugging devices
- Full helmets
- Earmuffs which can be fitted to industrial protective helmets
- Ear defenders with receiver for LF induction loop
- Ear protection with intercom equipment

EYE AND FACE PROTECTION

- Spectacles
- Goggles
- X-ray goggles, Laser-beam goggles, ultra-violet, infra-red, visible radiation goggles
- Face shields
- Arc-welding masks and helmets (hand masks, headband masks or masks which can be fitted to protective helmets)

RESPIRATORY PROTECTION

- Dust filters
- Gas filters
- Radioactive dust filters
- Insulating appliances (free air, compressed air, open circuit (air) or closed circuit (oxygen))
- Respiratory devices including a removable welding mask
- Diving equipment
- Diving suits

HAND AND ARM PROTECTION

- Gloves to provide protection from physical injury (piercing, cuts, vibrations, etc.)
- Gloves to provide protection from chemicals
- Electricians' gloves
- Mittens
- Finger stalls
- Oversleeves
- Wrist protection for heavy work
- Fingerless gloves
- Protective gloves

FOOT AND LEG PROTECTION

- Low shoes, ankle boots, calf-length boots, safety boots
- Shoes which can be unlaced or unhooked rapidly
- Shoes with additional protective toe-cap
- Shoes and overshoes with heat-resistant soles
- Heat-resistant shoes, boots and overboots
- Thermal shoes, boots and overboots
- Vibration-resistant shoes, boots and overboots
- Anti-static shoes, boots and overboots
- Insulating shoes, boots and overboots

- Protective boots for chain saw operators
- Clogs
- Kneepads
- Removable instep protectors
- Removable soles (heat-proof, pierce-proof or sweat-proof)
- Removable spikes for ice, snow or slippery flooring

#### SKIN PROTECTION

- Barrier creams/ointments

#### TRUNK AND ABDOMEN PROTECTION

- Protective waistcoats, jackets and aprons to provide protection from machinery (piercing, cutting, molten metal splasher, etc.)
- Protective waistcoats, jackets and aprons to provide protection from chemicals
- Heated waistcoats
- Protective X-ray aprons
- Safety belts for lorry drivers

## WHOLE BODY PROTECTION

### - EQUIPMENT DESIGNED TO PREVENT FALLS

- . Fall-prevention equipment (full equipment with all necessary accessories)
- . Braking equipment to absorb kinetic energy (full equipment with all necessary accessories)
- . Body-holding devices (safety harness)

### - PROTECTIVE CLOTHING

- . "Safety" working clothing (two-piece and overalls)
- . Clothing to provide protection from machinery (piercing, cutting, etc.)
- . Clothing to provide protection from chemicals
- . Clothing to provide protection from molten metal splasher and infra-red radiation
- . Heat-resistant clothing
- . Thermal clothing
- . Clothing to provide protection from radioactive contamination
- . Dust-proof clothing
- . Gas-proof clothing
- . Fluorescent signalling, retro-reflecting clothing and accessories (armsbands, gloves, etc.)
- . Protective coverings

Non-exhaustive information  
for evaluating personal protective equipment

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- 1 Industrial helmets
- 2 Goggles and visors
- 3 Ear protectors
- 4 Respirators
- 5 Gloves
- 6 Boots and shoes
- 7 Protective clothing
- 8 Life jackets for industrial use
- 9 Protection against falls

## 1. INDUSTRIAL HELMETS

Risk	Origin and type of risk	Safety and performance criteria for selection of equipment
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### RISKS TO BE COVERED

Mechanical	<ul style="list-style-type: none"> <li>- objects falling, impact</li> <li>- lateral crushing</li> <li>- stud drivers</li> </ul>	<ul style="list-style-type: none"> <li>- absorption of impact</li> <li>- resistance to puncture</li> <li>- lateral resistance</li> <li>- resistance to shots</li> </ul>
Electrical	<ul style="list-style-type: none"> <li>- low-voltage electricity</li> </ul>	<ul style="list-style-type: none"> <li>- electrical insulation</li> </ul>
Thermal	<ul style="list-style-type: none"> <li>- cold, heat</li> <li>- splashes of molten metal</li> </ul>	<ul style="list-style-type: none"> <li>- maintenance of characteristics at high and low temperatures</li> <li>- resistance to splashes of molten metal</li> </ul>
Low-visibility	<ul style="list-style-type: none"> <li>- not sufficiently noticeable</li> </ul>	<ul style="list-style-type: none"> <li>- luminous/reflective colour</li> </ul>

### RISKS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	<ul style="list-style-type: none"> <li>- inadequate comfort</li> </ul>	Ergonomic design : <ul style="list-style-type: none"> <li>■ weight</li> <li>■ headroom</li> <li>■ head fit</li> <li>■ ventilation</li> </ul>
Accidents and health hazards	<ul style="list-style-type: none"> <li>- poor compatibility</li> <li>- poor hygiene</li> <li>- poor stability, helmet falls off</li> <li>- contact with flames</li> </ul>	<ul style="list-style-type: none"> <li>- quality of materials</li> <li>- ease of maintenance</li> <li>- fit</li> <li>- non-flammability and resistance to flame</li> </ul>
Ageing	<ul style="list-style-type: none"> <li>- exposure to weather, ambient conditions, cleaning, use</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to industrial wear and tear</li> <li>- maintenance of characteristics throughout useful life</li> </ul>

### RISKS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	<ul style="list-style-type: none"> <li>- wrong choice of equipment</li> </ul>	Select equipment in line with the nature and scale of risks and stress : <ul style="list-style-type: none"> <li>- follow manufacturer's instructions</li> <li>- follow markings on equipment (e.g. level of protection, special uses)</li> <li>- Select equipment to suit user's individual requirements</li> </ul>
	<ul style="list-style-type: none"> <li>- incorrect use of equipment</li> </ul>	<ul style="list-style-type: none"> <li>- use equipment appropriate and be aware of risk</li> <li>- follow manufacturer's instructions</li> </ul>
	<ul style="list-style-type: none"> <li>- equipment dirty, worn or deteriorated</li> </ul>	<ul style="list-style-type: none"> <li>- maintain in good condition</li> <li>- regular checks</li> <li>- replace in good time</li> <li>- follow manufacturer's instructions</li> </ul>



## 2. GOGGLES AND VISORS

Risk	Origin and type of risk	Safety and performance criteria for selection of equipment
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### RISKS TO BE COVERED

-specific	<ul style="list-style-type: none"> <li>- stress arising from use</li> <li>- puncturing by low-power foreign bodies</li> </ul>	<ul style="list-style-type: none"> <li>- eyepiece with adequate mechanical resistance and shatter-resistant</li> <li>- imperviousness and resistance</li> </ul>
mechanical	<ul style="list-style-type: none"> <li>- high-speed particles, splinters, splashing</li> <li>- stud drivers</li> </ul>	<ul style="list-style-type: none"> <li>- mechanical resistance</li> </ul>
thermal/mechanical	<ul style="list-style-type: none"> <li>- burning particles at high speed</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to burning or molten materials</li> </ul>
thermal	<ul style="list-style-type: none"> <li>- hypothermia of the eyes</li> </ul>	<ul style="list-style-type: none"> <li>- close fit to face</li> </ul>
chemical	Irritation from : <ul style="list-style-type: none"> <li>■ gases</li> <li>■ aerosols</li> <li>■ dusts</li> <li>■ fumes</li> </ul>	<ul style="list-style-type: none"> <li>- imperviousness (lateral protection and chemical resistance)</li> </ul>
radiation	<ul style="list-style-type: none"> <li>- technical sources of infrared, visible and ultraviolet radiation, ionizing radiation and laser rays</li> <li>- natural radiation : daylight</li> </ul>	<ul style="list-style-type: none"> <li>- filtering capacity of eyepiece</li> <li>- imperviousness to radiation of frame</li> <li>- frame opaque to radiation</li> </ul>

### RISKS ARISING FROM THE EQUIPMENT

discomfort/interference with work	Inadequate comfort : <ul style="list-style-type: none"> <li>■ too bulky</li> <li>■ increased perspiration</li> <li>■ inadequate grip, contact pressure too high</li> </ul>	Ergonomic design : <ul style="list-style-type: none"> <li>■ reduced bulk</li> <li>■ adequate ventilation, anti-misting eyepiece</li> <li>■ individual adaptability to the user</li> </ul>
	<ul style="list-style-type: none"> <li>- poor compatibility</li> <li>- poor hygiene</li> </ul>	<ul style="list-style-type: none"> <li>- quality of materials</li> <li>- ease of maintenance</li> </ul>
	<ul style="list-style-type: none"> <li>- risk of cuts from sharp edges</li> </ul>	<ul style="list-style-type: none"> <li>- rounded edges and rims</li> <li>- use of safety eyepieces</li> </ul>
accidents and health hazards	<ul style="list-style-type: none"> <li>- impairment of vision caused by poor optical quality, e.g. distortion, modification of colours, in particular signals, diffusion</li> <li>- reduction of field of visibility</li> <li>- reflection</li> <li>- sudden severe changes in transparency (light - dark)</li> <li>- misty eyepieces</li> </ul>	<ul style="list-style-type: none"> <li>- check optical quality</li> <li>- use abrasion-proof eyepieces</li> <li>- eyepieces of adequate size</li> <li>- anti-reflective eyepieces and frame</li> <li>- eyepiece light reaction speed (photochromatic)</li> <li>- anti-misting facility</li> </ul>
aging	<ul style="list-style-type: none"> <li>■ exposure to weather, ambient conditions, cleaning, use</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to industrial wear and tear</li> <li>- maintenance of characteristics throughout useful life</li> </ul>

RISKS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	wrong choice of equipment	Select equipment in line with the type and scale of the risks and stress : - follow manufacturer's instructions - follow markings on equipment (e.g. level of protection, special uses) Select equipment to suit user's individual requirements
	incorrect use of equipment	- use equipment appropriately, be aware of risk - follow manufacturer's instructions
	equipment dirty, worn or deteriorated	- maintain in good condition - regular checks - replace in good time - follow manufacturer's instructions

### 3. EAR PROTECTORS

Risk	Origin and type of risk	Safety and performance criteria for selection of equipment
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#### RISKS TO BE COVERED

Noise	<ul style="list-style-type: none"> <li>- continuous noise</li> <li>- impulse noise</li> </ul>	<ul style="list-style-type: none"> <li>- sufficient noise reduction for all types of noise</li> </ul>
Thermal	<ul style="list-style-type: none"> <li>- metal splashing, for example during welding</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to molten or burning materials</li> </ul>

#### RISKS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort : <ul style="list-style-type: none"> <li>- too bulky</li> <li>- too much pressure</li> <li>- increased perspiration</li> <li>- inadequate grip</li> </ul>	Ergonomic design : <ul style="list-style-type: none"> <li>- bulk</li> <li>- pressure when worn and effort required to keep in place</li> <li>- adaptability to individual requirements</li> </ul>
Restriction of hearing capacity	<ul style="list-style-type: none"> <li>- deterioration of ability to understand words, recognize signals and key sounds during work and to locate direction of noise</li> </ul>	<ul style="list-style-type: none"> <li>- variation in noise reduction depending on frequency, reduction in hearing performance</li> <li>- possibility of replacing shells with earplugs</li> <li>- audio tests before selection</li> <li>- use of appropriate electro-acoustic protection</li> </ul>
Accidents and health hazards	<ul style="list-style-type: none"> <li>- poor compatibility</li> <li>- poor hygiene</li> <li>- unsuitable materials</li> <li>- sharp edges</li> <li>- pulls hair</li> <li>- contact with burning objects</li> <li>- contact with flame</li> </ul>	<ul style="list-style-type: none"> <li>- quality of materials</li> <li>- ease of maintenance</li> <li>- possibility of replacing muffs with shells, use of disposable earplugs</li> <li>- rounded edges and corners</li> <li>- eliminate elements which pull hair</li> <li>- resistance to combustion and melting</li> <li>- non-flammability, resistance to flame</li> </ul>
Ageing	<ul style="list-style-type: none"> <li>- exposure to weather, ambient conditions, cleaning, use</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to industrial wear and tear</li> <li>- maintenance of characteristics throughout useful life</li> </ul>

RISKS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	- wrong choice of equipment	Select equipment in line with nature and scale of risks and stress: ■ follow manufacturer's instructions ■ follow markings on equipment (e.g. level of protection, special uses) Select equipment to suit user's individual requirements
	- incorrect use of equipment	- use equipment appropriate, be aware of risk - follow manufacturer's instructions
	- equipment dirty, worn or deteriorated	- maintain in good condition - regular checks - replace in good time - follow manufacturer's instructions

#### 4. RESPIRATORS

Risk	Origin and type of risk	Safety and performance criteria for selection of equipment
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#### RISKS TO BE COVERED

Effect of dangerous substances in inhaled air	- particulate pollutants (dust, fumes, aerosols)	- particle filter of the required efficiency (filter grade), depending on concentration, toxicity/health hazard and size range of particles - particular attention should be given to liquid particles (droplets)
	- gaseous and evaporative pollutants	- selection of suitable gas filter type and appropriate filter grade, depending on concentration, toxicity/health hazard, length of time to be worn and nature of work
	- particulate and gaseous aerosol pollutants	- selection of suitable combined filter type according to same criteria as for particle and gas filters
Lack of oxygen in inhaled air	- oxygen retention - oxygen pressure	- guaranteed oxygen supply through equipment - respect oxygen capacity of equipment in relation to duration of use

#### RISKS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort : - size - bulk - supply - respiratory resistance - microclimate in respirator - use	Ergonomic design : - adaptability - small bulk, good weight distribution - no interference with head movements - respiratory resistance and high pressure in respiratory zone - respirators with breathing valve, blower - easy to handle/use
Accidents and health hazards	- poor compatibility - poor hygiene - not airtight (leaks) - accumulation of CO <sub>2</sub> in inhaled air - contact with naked flames, sparks, splatters of molten metal - reduction of field of vision - contamination	- quality of materials - ease of maintenance and disinfection - airtight fit to the face ; imperviousness of equipment - respirators with breathing valves, blower or CO <sub>2</sub> absorbers - use of non-flammable materials - adequate range of field of vision - resistance, ease of decontamination
Ageing	- exposure to weather, ambient conditions, cleaning, use	- resistance to industrial wear and tear - maintenance of characteristics throughout useful life

RISKS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	- wrong choice of equipment	Select equipment in line with nature and scale of risks and stress : - follow manufacturer's instructions - follow markings on equipment (e.g. level of protection, special uses) - observe restrictions on use and duration of use ; where oxygen concentration is too high or too low clean-air equipment should be used instead of filtered-air equipment Select equipment to suit user's individual requirements (possibility of change)
	- incorrect use of equipment	- use equipment appropriately, be aware of risk - follow information and instructions for use provided by manufacturer, safety organizations and test laboratories
	- equipment dirty, worn or deteriorated	- maintain in good condition - regular checks - respect maximum periods of use - replace in good time - follow manufacturer's instructions as safety rules

## 5. PROTECTIVE GLOVES

Risk	Origin and type of risk	Safety and performance criteria for selection of equipment
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### RISKS TO BE COVERED

General	<ul style="list-style-type: none"> <li>- contact</li> <li>- use-related stress</li> </ul>	<ul style="list-style-type: none"> <li>- area of hand covered</li> <li>- resistance to tearing, stretching, abrasion</li> </ul>
Mechanical	<ul style="list-style-type: none"> <li>- by abrasive, sharp or pointed objects</li> <li>- impact</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to penetration, puncture and cutting</li> <li>- padding</li> </ul>
Thermal	<ul style="list-style-type: none"> <li>- burning or cold materials, ambient temperature</li> <li>- contact with naked flame</li> <li>- effects of welding work</li> </ul>	<ul style="list-style-type: none"> <li>- insulation against cold and heat</li> <li>- non-flammability, resistance to flame</li> <li>- protection from and resistance to radiation and splashes of molten metal</li> </ul>
Electrical	<ul style="list-style-type: none"> <li>- electricity</li> </ul>	<ul style="list-style-type: none"> <li>- electrical insulation</li> </ul>
Chemical	<ul style="list-style-type: none"> <li>- action of chemicals</li> </ul>	<ul style="list-style-type: none"> <li>- imperviousness, resistance</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>- mechanical vibration</li> </ul>	<ul style="list-style-type: none"> <li>- vibration reduction</li> </ul>
Contamination	<ul style="list-style-type: none"> <li>- contacts with radioactive materials</li> </ul>	<ul style="list-style-type: none"> <li>- imperviousness, ease of decontamination, resistance</li> </ul>

### RISKS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	<ul style="list-style-type: none"> <li>- inadequate comfort</li> </ul>	Ergonomic design : <ul style="list-style-type: none"> <li>- bulk, grading of sizes, surface area, comfort, permeability to water vapour</li> </ul>
Accidents and health hazards	<ul style="list-style-type: none"> <li>- poor compatibility</li> <li>- poor hygiene</li> <li>- gloves stick to the skin</li> </ul>	<ul style="list-style-type: none"> <li>- quality of materials</li> <li>- ease of maintenance</li> <li>- good shaping design</li> </ul>
Ageing	<ul style="list-style-type: none"> <li>- exposure to weather, ambient conditions, cleaning, use</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to industrial wear and tear</li> <li>- maintenance of characteristics throughout useful life</li> <li>- maintenance of size</li> </ul>

### RISKS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	<ul style="list-style-type: none"> <li>- wrong choice of equipment</li> </ul>	Select equipment in line with nature and scale of risks and stress : <ul style="list-style-type: none"> <li>- follow manufacturer's instructions</li> <li>- follow markings on equipment (e.g. level of protection, special uses)</li> </ul> Select equipment to suit user's individual requirements
	<ul style="list-style-type: none"> <li>- incorrect use of equipment</li> </ul>	<ul style="list-style-type: none"> <li>- use equipment appropriately, be aware of risk</li> <li>- follow manufacturer's instructions</li> </ul>
	<ul style="list-style-type: none"> <li>- equipment dirty, worn or deteriorated</li> </ul>	<ul style="list-style-type: none"> <li>- maintain in good condition</li> <li>- regular checks</li> <li>- replace in good time</li> <li>- follow manufacturer's instructions</li> </ul>

## 6. SAFETY BOOTS AND SHOES

Risk	Origin and type of risk	Safety and performance criteria for selection of equipment
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### RISKS TO BE COVERED

Mechanical	<ul style="list-style-type: none"> <li>- objects falling on or crushing the front of the foot</li> <li>- falls and impact on heel</li> <li>- falls as a result of slipping</li> <li>- treading on pointed or sharp objects</li> <li>- damage to the malleoli</li> <li>- the metatarsus</li> <li>- the leg</li> </ul>	<ul style="list-style-type: none"> <li>- resistance of the front of the boot or shoe</li> <li>- energy-absorbing capacity of the heel</li> <li>- reinforcement of instep</li> <li>- resistance to slipping of sole</li> <li>- puncture-proof sole</li> <li>- protection for the malleoli</li> <li>- the metatarsus</li> <li>- the leg</li> </ul>
Electrical	<ul style="list-style-type: none"> <li>- low and medium voltage</li> <li>- high voltage</li> </ul>	<ul style="list-style-type: none"> <li>- electrical insulation</li> <li>- electrical conductivity</li> </ul>
Thermal	<ul style="list-style-type: none"> <li>- cold, heat</li> <li>- molten metal spatter</li> </ul>	<ul style="list-style-type: none"> <li>- thermal insulation</li> <li>- resistance, imperviousness</li> </ul>
Chemical	<ul style="list-style-type: none"> <li>- harmful dusts or liquids</li> </ul>	<ul style="list-style-type: none"> <li>- resistance and impermeability</li> </ul>

### RISKS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort : <ul style="list-style-type: none"> <li>- the shoe does not fit</li> <li>- poor absorption of perspiration</li> <li>- fatigue from using the equipment</li> <li>- the shoe leaks</li> </ul>	Ergonomic design : <ul style="list-style-type: none"> <li>- shape, padding, size</li> <li>- vapour permeability and water absorption capacity</li> <li>- flexibility, bulk</li> <li>- waterproofing</li> </ul>
Accidents and health hazards	<ul style="list-style-type: none"> <li>- poor compatibility</li> <li>- poor hygiene</li> <li>- risk of dislocations and sprains because of poor foot holding</li> </ul>	<ul style="list-style-type: none"> <li>- quality of materials</li> <li>- ease of maintenance</li> <li>- stiffness across width of the shoe and arch support, fit</li> </ul>
Ageing	<ul style="list-style-type: none"> <li>- exposure to weather, ambient conditions, cleaning, use</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to corrosion, abrasion and fatigue of the sole</li> <li>- resistance to industrial wear and tear</li> <li>- maintenance of characteristics throughout useful life</li> </ul>
Static electricity	<ul style="list-style-type: none"> <li>- discharge of static electricity</li> </ul>	<ul style="list-style-type: none"> <li>- electrical conductivity</li> </ul>



RISKS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	- wrong choice of equipment	Select equipment in line with nature and scale of risks and stress : - follow manufacturer's instructions - follow markings on equipment (e.g. level of protection, special uses) Select equipment to suit user's individual requirements
	- incorrect use of equipment	- use equipment appropriately, be aware of risk - follow manufacturer's instructions
	- equipment dirty, worn or deteriorated	- maintain in good condition - regular checks - replace in good time - follow manufacturer's instructions

## 7. PROTECTIVE CLOTHING

Risk	Origin and type of risk	Safety and performance criteria for selection of equipment
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### RISKS TO BE COVERED

General	<ul style="list-style-type: none"> <li>- contact</li> <li>- stress arising from use</li> </ul>	<ul style="list-style-type: none"> <li>- coverage of torso</li> <li>- resistance to tearing, stretching, prevention of spreading of tears</li> </ul>
Mechanical	<ul style="list-style-type: none"> <li>- abrasive, pointed and sharp objects</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to penetration</li> </ul>
Thermal	<ul style="list-style-type: none"> <li>- burning or cold materials, ambient temperature</li> <li>- contact with naked flames</li> <li>- welding work</li> </ul>	<ul style="list-style-type: none"> <li>- insulation against cold and heat, maintenance of protective qualities</li> <li>- non-flammability, resistance to flame</li> <li>- protection from and resistance to radiation and splashes of molten metal</li> </ul>
Electrical	<ul style="list-style-type: none"> <li>- electricity</li> </ul>	<ul style="list-style-type: none"> <li>- electrical insulation</li> </ul>
Chemical	<ul style="list-style-type: none"> <li>- chemical damage</li> </ul>	<ul style="list-style-type: none"> <li>- impermeability and resistance to chemical damage</li> </ul>
Humidity	<ul style="list-style-type: none"> <li>- clothing leaks</li> </ul>	<ul style="list-style-type: none"> <li>- waterproofing</li> </ul>
Non-visibility	<ul style="list-style-type: none"> <li>- clothing difficult to see</li> </ul>	<ul style="list-style-type: none"> <li>- bright or reflective colour</li> </ul>
Contamination	<ul style="list-style-type: none"> <li>- contact with radioactive materials</li> </ul>	<ul style="list-style-type: none"> <li>- impermeability, ease of decontamination, resistance</li> </ul>

### RISKS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	<ul style="list-style-type: none"> <li>- inadequate comfort</li> </ul>	Ergonomic design : <ul style="list-style-type: none"> <li>- size, grading of sizes, surface area, comfort, permeability to water vapour</li> </ul>
Accidents and health hazards	<ul style="list-style-type: none"> <li>- poor compatibility</li> <li>- poor hygiene</li> <li>- clothing sticks to the skin</li> </ul>	<ul style="list-style-type: none"> <li>- quality of materials</li> <li>- ease of maintenance</li> <li>- good shaping design</li> </ul>
Ageing	<ul style="list-style-type: none"> <li>- exposure to weather, ambient conditions, cleaning, use</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to industrial wear and tear</li> <li>- maintenance of characteristics throughout useful life</li> <li>- maintenance of size</li> </ul>

### RISKS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	<ul style="list-style-type: none"> <li>- wrong choice of equipment</li> </ul>	Select equipment in line with nature and scale of risks and stress : <ul style="list-style-type: none"> <li>- follow manufacturer's instructions</li> <li>- follow markings on equipment (e.g. level of protection, special uses)</li> </ul> Select equipment to suit user's individual requirements
	<ul style="list-style-type: none"> <li>- incorrect use of equipment</li> </ul>	<ul style="list-style-type: none"> <li>- use equipment appropriately, be aware of risk</li> <li>- follow manufacturer's instructions</li> </ul>
	<ul style="list-style-type: none"> <li>- equipment dirty, worn or deteriorated</li> </ul>	<ul style="list-style-type: none"> <li>- maintain in good condition</li> <li>- regular checks</li> <li>- replace in good time</li> <li>- follow manufacturer's instructions</li> </ul>

## 8. LIFE JACKETS FOR INDUSTRIAL USE

Risk	Origin and type of risk	Safety and performance criteria for selection of equipment
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### RISKS TO BE COVERED

Drowning	<ul style="list-style-type: none"> <li>- fall into water of a person in work clothing, unconscious or deprived of physical faculties</li> </ul>	<ul style="list-style-type: none"> <li>- buoyancy</li> <li>- righting ability even if wearer is unconscious</li> <li>- inflation time</li> <li>- triggering of automatic inflation</li> <li>- ability to keep mouth and nose out of the water</li> </ul>
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### RISKS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	<ul style="list-style-type: none"> <li>- constraint caused by size or poor design</li> </ul>	<ul style="list-style-type: none"> <li>- ergonomic design which does not restrict vision, respiration or movement</li> </ul>
Accidents and health hazards	<ul style="list-style-type: none"> <li>- jacket falls off if wearer falls into water</li> <li>- damage to jacket during use</li> <li>- function of inflation system affected</li>   <li>- inappropriate use</li> </ul>	<ul style="list-style-type: none"> <li>- design (stays in position)</li> <li>- resistance to mechanical damage (impact, crushing, perforation)</li> <li>- maintenance of safety qualities under all conditions</li> <li>- type of gas used for inflation (size of container, whether or not gas is harmful)</li> <li>- efficiency of automatic inflation device (also after long storage)</li> <li>- possibility of triggering inflation manually</li> <li>- provision of a device for oral inflation even while jacket is worn</li> <li>- outline instructions for use marked on jacket indelibly</li> </ul>
Ageing	<ul style="list-style-type: none"> <li>- exposure to weather, ambient conditions, cleaning, use</li> </ul>	<ul style="list-style-type: none"> <li>- resistance to chemical, biological and physical attack : seawater, detergents, hydrocarbons, micro-organisms (bacteria, mould)</li> <li>- resistance to climatic factors : thermal stress, humidity, rain, splashing, solar radiation</li> <li>- resistance of materials and protective covers : tearing, abrasion, non-flammability, spattering of molten metal (welding)</li> </ul>

RISKS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	- wrong choice of equipment	Select equipment in line with nature and scale of risks and stress : - follow manufacturer's instructions - follow markings on equipment (e.g. level of protection, special uses) Select equipment to suit user's individual requirements
	- incorrect use of equipment	- use equipment appropriately, be aware of risk - follow manufacturer's instructions
	- equipment dirty, worn or deteriorated	- maintain in good condition - regular checks - replace in good time - follow manufacturer's instructions

## 9. EQUIPMENT FOR PROTECTION AGAINST FALLS

Risk	Origin and type of risk	Safety and performance criteria for selection of equipment
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### RISKS TO BE COVERED

Impact	<ul style="list-style-type: none"> <li>- falls from a height</li> <li>- loss of balance</li> </ul>	<ul style="list-style-type: none"> <li>- resistance and suitability of equipment and anchorage point</li> </ul>
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### RISKS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	<ul style="list-style-type: none"> <li>- inadequate ergonomic design</li> <li>- restriction of freedom of movement</li> </ul>	Ergonomic design : <ul style="list-style-type: none"> <li>- method of construction</li> <li>- bulk</li> <li>- flexibility</li> <li>- ease of putting on</li> <li>- gripping device with automatic length adjustment</li> </ul>
Accidents and health hazards	- dynamic stress exerted on the user and equipment during braking	Suitability of equipment : <ul style="list-style-type: none"> <li>- distribution of braking stress to parts of the body with absorption capacity</li> <li>- reduction of braking force</li> <li>- braking distance</li> <li>- position of attaching device</li> </ul>
	- oscillation and lateral impact	- anchorage point above the head, anchorage at other points
	<ul style="list-style-type: none"> <li>- static stress exerted on suspended body by straps</li> <li>- slipping of link device</li> </ul>	<ul style="list-style-type: none"> <li>- design of equipment (distribution of stress)</li> <li>- short link device, e.g. safety harness, espace line</li> </ul>
Ageing	- change in mechanical resistance resulting from exposure to weather, ambient conditions, cleaning and use	<ul style="list-style-type: none"> <li>- resistance to corrosion</li> <li>- resistance to industrial wear and tear</li> <li>- maintenance of characteristics throughout useful life</li> </ul>

### RISKS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	- wrong choice of equipment	Select equipment in line with nature and scale of risks and stress : <ul style="list-style-type: none"> <li>- follow manufacturer's instructions</li> <li>- follow markings on equipment (e.g. level of protection, special uses)</li> </ul> Select equipment to suit user's individual requirements
	- incorrect use of equipment	<ul style="list-style-type: none"> <li>- use equipment appropriately, be aware of risk</li> <li>- follow manufacturer's instructions</li> </ul>
	- equipment dirty, worn or deteriorated	<ul style="list-style-type: none"> <li>- maintain in good condition</li> <li>- regular checks</li> <li>- replace in good time</li> <li>- follow manufacturer's instructions</li> </ul>

Non-exhaustive guide list  
of activities and sectors of activity  
referred to in Article 6(1)

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1. Head protection (skull protection)

Protective helmets

- Building work, particularly work on, underneath or in the vicinity of scaffolding and elevated work places, erection and stripping of formwork, assembly and installation work, work on scaffolding and demolition work.
- Work on steel bridges, steel building construction, masts, towers, steel hydraulic structures, blast furnaces, steel works and rolling mills, large containers, large pipelines, boiler plants and power stations.
- Work in pits, trenches, shafts and tunnels.
- Earth and rock works.
- Work in underground workings, quarries, open diggings, coal stock removal
- Work with bolt-driving tools.
- Blasting work.
- Work in the vicinity of lifts, lifting gear, cranes and conveyors.
- Work with blast furnaces, direct reduction plants, steelworks,

rolling mills, ironworks, forging, drop forging and casting.

- Work with industrial furnaces, containers, machinery, silos, bunkers and pipelines.
- Shipbuilding.
- Railway shunting work.
- Slaughterhouses.

2. Foot protection

Safety shoes with pierce-proof soles

- Carcass work, foundation work and roadworks.
- Scaffolding work.
- The demolition of carcass work.
- Work with concrete and prefabricated parts involving formwork erection and stripping.
- Work in contractors' yards and warehouses.

Safety shoes without pierce-proof soles

- Work on steel bridges, steel building construction, masts, towers, lifts, steel hydraulic structures, blast furnaces, steelworks and rolling mills, large containers, large pipelines, cranes, boiler plants and power stations.
- Furnace construction, heating and ventilation installation and metal assembly work.
- Conversion and maintenance work.
- Work with blast furnaces, direct reduction plants, steelworks, rolling mills, ironworks, forging, drop forging, hot pressing and drawing plants.
- Work in quarries and open diggings, coal stock removal.
- Working and processing of rock.



- Flat glass products and container glassware manufacture, working and processing.
- Work with moulds in the ceramics industry.
- Lining of kilns in the ceramics industry.
- Moulding work in the ceramic ware and building materials industry.
- Transport and storage.
- Work with frozen meat blocks and preserved foods packaging.
- Shipbuilding.
- Railway shunting work.
- Skilled work of all kinds.

Safety shoes with heels or wedges and pierce-proof soles

- Roof work.

Protective shoes with insulated sole

- Work with and on very hot or very cold materials.

Safety shoes which can easily be removed

- Where there is a risk of penetration by molten substances.

3. Eye or face protection

Protective goggles, face shields or screens

- Welding, grinding and separating work.
- Caulking and chiselling.
- Rock working and processing.
- Work with bolt-driving tools.
- Work on stock removing machines for small chippings.
- Drop forging.
- The removal and breaking up of fragments.
- Spraying of abrasive substances.
- Work with acids and caustic solutions, disinfectants and corrosive cleaning products.
- Work with liquid sprays.
- Work with and in the vicinity of molten substances.
- Work with radiant heat.
- Work with lasers.

#### 4. Respiratory protection

##### Respirators

Work in containers, restricted areas and gas-fired industrial furnaces where there may be gas or insufficient oxygen.

Work in the vicinity of the blast furnace charge.

- Work in the vicinity of gas converters and blast furnace gas pipes.
- Work in the vicinity of blast furnace taps where there may be heavy metal fumes.
- Work on the lining of furnaces and ladles where there is dust.
- Spray painting where dedusting is inadequate.
- Work in shafts, sewers and other underground areas connected with sewage.
- Work in refrigeration plants where there is a danger that the refrigerant may escape.

5. Hearing protection

Ear protectors

- Work with metal presses.
- Work with pneumatic drills.
- The work of ground staff at airports.
- Pile-driving work.

6. Body, arm and hand protection

Protective clothing

- Work with acids and caustic solutions, disinfectants and corrosive cleaning substances.
- Work with or in the vicinity of hot materials and where the effects of heat are felt.
- Work on flat glass products.
- Sand spraying.
- Work in deep-freeze rooms.

Fire-resistant protective clothing

- Welding in restricted areas.

Pierce-proof aprons

- Boning and cutting work.
- Work with hand knives involving drawing the knife towards the body.

Leather aprons

- Welding.
- Forging.
- Casting.

Forearm protection

- Boning and cutting.

Gloves

- Welding.
- Handling of sharp-edged objects, other than machines, where there is a danger of being cut.
- Unprotected work with acids and caustic solutions.

Metal mesh gloves

- Boning and cutting.
- Regular cutting using a hand knife for production and slaughtering.
- Changing the knives of cutting machines.

7. Weatherproof clothing

- Building work in the open air in rain and cold weather.

8. Reflective clothing

- Work where the workers must be clearly visible.

9. Safety harnesses

- Work on scaffolding.
- Assembly of prefabricated parts.
- Work on masts.

10. Safety ropes

- Work in high crane cabs.
- Work in high cabs of warehouse stacking and retrieval equipment.
- Work in high sections of drilling towers.
- Work in shafts and sewers.

11. Skin protection

- Processing of coating materials.
- Tanning.



## FINANCIAL RECORD SHEET

### 1. Budget item concerned

B 6482 : Health protection, hygiene and safety at work.

A 2510 : Compulsory committees.

A 2513 : Advisory Committee on Safety, Hygiene and Health Protection at Work.

### 2. Legal basis

a) Article 118A of the EEC Treaty.

b) Commission Communication on its programme concerning safety, hygiene and health at work (COM (87) 520 – Council Resolution 88/C28/01 of 21.12.1987, OJ C 28 of 3.2.1988).

c) Commission White Paper on the completion of the internal market (COM 85 (310) final).

d) Council Resolution of 7.5.1985 (OJ C 136 of 4.6.1985) concerning the new approach.

### 3. Proposed classification into compulsory/non-compulsory expenditure

Non-compulsory.

### 4. Description and justification of the action

#### 4.1. Description

##### 4.1.1. Objectives of the proposed Directive

The proposed Directive has the following aims:

-to add a "social element" to various directives on technical harmonization designed to complete the internal market in personal protective equipment

-to improve the safety and health of workers in respect of the use of personal protective equipment.