

Use of Personal Protective Equipment

Provisions of the Swedish Work Environment Authority on Use of Personal Protective Equipment, together with General Recommendations on the implementation of the Provisions

Translation

In the event of disagreement concerning the interpretation and content of this text, the printed Swedish version shall have priority

AFS 2001:3

The Swedish Work Environment Authority was formed through a merger of the Swedish National Board of Occupational Safety and Health and the Labour Inspectorate, on 1st January 2001.

Provisions adopted by the Swedish Work Environment Authority are published in the Statute Book of the Swedish Work Environment Authority. Provisions earlier published in the Statute Book of the Swedish National Board of Occupational Safety and Health simultaneously still apply. Both Statute Books' names are abbreviated AFS.

Please note that references to statutes always give the original number of the document concerned, regardless of any subsequent amendments and reprints.

Concerning amendments to and reprints of Provisions of the Swedish National Board of Occupational Safety and Health and of the Swedish Work Environment Authority, reference is made to the latest Statute Book Register (in Swedish). A list of Ordinances, General Recommendations, Directions and Notices is also published in English.

Swedish Work Environment Authority

SE-171 84 SOLNA , Sweden

Telephone: +46 8 730 90 00

Telefax: +46 8 730 91 67

Publishing Services, telefax: +46 8 735 85 55

www.av.se

List of contents

Provisions of the Swedish Work Environment Authority on Use of Personal Protective Equipment	4
Scope	4
General provisions	5
Collective protection. Risk assessment and choice of equipment.....	5
Use.....	6
Information	6
Maintenance and storage	7
Entry into force and interim Provisions	7
General Recommendations of the Work Environment Authority on the implementation of the Provisions on Use of Personal Protective Equipment.....	8
Background	8
General	8
Guidance on individual Sections.....	9
App. 1 List of Provisions and General Recommendations containing special rules on use of PPE.	14
Information from the Work Environment Authority	16



Published 21 st May 2001

Provisions of the Swedish Work Environment Authority on Use of Personal Protective Equipment

Adopted 19th April 2001

The following Provisions are issued by the Swedish Work Environment Authority pursuant to Section 18 of the Work Environment Ordinance (SFS 1977:1166)¹.

Scope

Section 1

For the purposes of these Provisions, personal protective equipment shall mean all equipment designed to be worn or held by the worker to protect him/her against one or more hazards likely to endanger his/her safety and health at work, and any addition or accessory designed to meet this objective.

The following items of equipment are excluded from the scope of these Provisions:

- (a) Ordinary working clothes and uniforms not specifically designed to protect the safety and health of the worker.
- (b) Self-defence or deterrent equipment.
- (c) Portable devices for detecting and signalling risks and nuisances.

Section 2

For the purposes of these Provisions, the following are equated with an employer:

1. A party engaging outsourced manpower for work in his operation.

¹ Cf. Council Directive 89/656/EEC of 30 November 1989 on the minimum health and safety requirements for the use by workers of personal protective equipment at the workplace (OJ L 393, 30/11/1989, p. 18).

2. A party professionally engaging, singly or together with a family member, but without any employees, in any of the following activities:
 - (a) Construction or building and civil engineering work.
 - (b) Other work, but only as regards protection against risks from technical devices or dangerous substances.
3. Persons otherwise engaging, jointly and professionally, in activities without employees.

General provisions

Section 3

If, at the time of its being placed on the market or taken into service within the EEA, personal protective equipment was subject to Swedish Provisions transposing EC law to Swedish law, the following shall apply. The equipment may be used only if it still meets the requirements, with respect to its nature and instructions for its use, which are contained in the Provisions which applied to the equipment at the time of its being placed on the market or taken into service.

The same shall apply to personal protective equipment subject to corresponding Provisions in another country within the EEA. As regards marking and instructions for use, however, the requirements of language indicated by the Swedish Provisions shall always apply in connection with use.

Section 4

The employer shall, at no cost to the employee, provide the personal protective equipment needed for the work.

Collective protection. Risk assessment and choice of equipment

Section 5

Collective protection shall have priority over individualised measures of protection. Personal protective equipment shall be used when the risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organisation.

Before choosing personal protective equipment, the employer is required to analyse and assess the risks entailed by the work and the characteristics which personal protective equipment must have in order to be effective against them. Any risks which the equipment itself may create shall also be taken into account. The assessment shall be reviewed if any changes are made to any of its elements.

Use

Section 6

Personal protective equipment may be used only if it

- (a) is appropriate for the risks involved, without itself leading to any increased risk,
- (b) corresponds to existing conditions at the workplace,
- (c) takes account of actual work postures and working movements,
- (d) takes account of the worker's state of health and
- (e) fits the wearer correctly after any necessary adjustment.

Section 7

Failing special reasons for exception, personal protective equipment shall be intended for personal use. If the equipment is worn by more than one person, measures shall be taken to ensure that such use does not create any health or hygiene problem for the different users.

Personal protective equipment may be used only for the purposes specified.

Section 8

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

Section 9

When personal protective equipment is used, account shall be taken of

- (a) the duration of the work,
- (b) the physical and mental load,
- (c) the extent and frequency of the risk,
- (d) special conditions prevailing at the workplace, and
- (e) the performance of the personal protective equipment concerned.

Information

Section 10

The employer shall first inform the worker of the risks against which the wearing of the personal protective equipment protects him/her. The employer shall also arrange instruction and practice and, if necessary, demonstrate how the equipment is to be used in order to achieve the protection intended.

Appropriate written information concerning each item of personal protective equipment concerned shall be provided and kept available within the undertaking or operation.

Section 11

Employees shall comply with instructions given concerning the use of personal protective equipment.

Maintenance and storage

Section 12

The employer shall see to it that the personal protective equipment is maintained, inspected, repaired and stored in such a way that its protective effect and hygienic quality are preserved. Equipment which has been damaged or for some other reason presumably affords insufficient protection may not be used.

Entry into force and interim Provisions

These Provisions enter into force on 1st July 2001.

The Ordinance of the National Board of Occupational Safety and Health containing General Provisions on Personal Protective Equipment (AFS 1993:40) is repealed with effect from the said date.

KENTH PETTERSSON

Björn Andersson

Göran Lindh

General Recommendations of the Work Environment Authority on the implementation of the Provisions on Use of Personal Protective Equipment

The following Recommendations are issued by the Work Environment Authority on the implementation of its Provisions (AFS 2001:3) on Use of Personal Protective Equipment.

General Recommendations have a different legal status from Provisions. They are not mandatory. Instead they serve to elucidate the meaning of the Provisions (e.g. by explaining suitable ways of meeting the requirements, instancing practical solutions and procedures) and to provide recommendations, background information and references.

Background

As a member of the European Union (EU), Sweden is required to transpose EU Directives to Swedish Provisions. The EU rules on workers' safety and health are laid down in a *framework directive* which sets forth the basic rules on safety and health in the workplace. A number of *individual directives* also lay down minimum requirements to be met by the EU Member States. The Third Individual Directive (89/656/EEC) contains requirements on the use by workers of personal protective equipment at the workplace. The present Provisions on Use of Personal Protective Equipment are based on that Directive.

General

Responsibility for a safe and otherwise satisfactory working environment devolves primarily on the employer.

The Work Environment Authority has issued Provisions on Systematic Work Environment Management, dealing among other things with the employer's duty of investigating, conducting and monitoring the operation in such a way that ill-health and accidents at work are prevented and a satisfactory working environment achieved. More detailed stipulations exist, for example, concerning regular investigation of working conditions and concerning the assessment of risks of any person being afflicted with ill-health or meeting with an accident at work. The Provisions also include stipulations on the implementation of measures immediately or as soon as is practically possible.

Chap. 2, Section 7 of the Work Environment Act (AML) lays down that "Personal protective equipment shall be used when adequate security from ill-health or accidents cannot be achieved by other means."

The injuries against which protection is desired may be connected, for example, with mechanical hazards, chemical hazards, infection risks, noise, heat or cold.

Chap. 2, Section 7 of AML requires the employer to provide the employees with personal protective equipment, while Chap. 3, Section 4 makes it the employee's duty to comply with instructions given and to use the necessary personal protective equipment.

Under Chap. 3, Section 8 of AML, safety equipment shall when delivered be accompanied by information about it material to the prevention of ill-health and accidents. This can, for example, take the form of a description indicating how the personal protective equipment shall be used and cared for.

Guidance on individual Sections

Guidance on Section 1

Personal protective equipment (PPE) includes, for example, hearing protectors, safety helmets, eye protectors, respiratory protective equipment, diving apparatus, safety shoes, fall protective systems, safety gloves, protective clothing (e.g. for protection against stab and cuts and other mechanical injuries, chemicals, micro organisms, heat, cold and specific climate factors), and protective clothing such as aprons, watertight clothing and high visibility harnesses. Equipment excluded from the scope of the Provisions includes portable equipment for measuring gas concentration or oxygen deficiency.

Guidance on Section 2

This Section means that whenever the Provisions say "the employer shall", the duty in question also applies to the categories enumerated in points 1 – 3.

For one-man enterprises without employees and family businesses without employees, the basic principle is that AML and the Provisions adopted by authority of AML apply solely to risks emanating from technical devices or hazardous substances and with reference to a common workplace. One-man and family businesses, however, incur a wider responsibility as regards work coming under the Provisions of the National Board of Occupational Safety and Health on Building and Civil Engineering Work, hence the distinction in point 2 of this Section between (a) "Building and civil engineering work" and (b) "Other work ...". A basic provision on this subject is contained in Section 2 of the Provisions of the National Board of Occupational Safety and Health on Building and Civil Engineering Work (AFS 1999:3). See also the Guidance on that Section.

Point 3 refers to those who, without being members of one and the same family, professionally engage, without employees, in activities on their common behalf.

Guidance on Section 3

The EC Directive (89/686/EEC) on the approximation of the laws of the Member States relating to personal protective equipment was incorporated in Swedish law through Ordinance AFS 1993:11 of the National Board of Occupational Safety and Health containing Provisions on Design of Personal Protective Equipment. Following amendments to the Directive, those Provisions were superseded by the Board's Ordinance AFS 1996:7, containing Provisions on Design of Personal Protective Equipment.

Guidance on Section 4

The requirement that PPE shall be provided free of charge to the employee applies when the equipment is used at work. There is nothing to prevent an agreement whereby the employee contributes towards the cost of certain PPE in return for being allowed to use it outside working hours or in return for it becoming the employee's personal property.

Guidance on Section 5

As Chap. 2, Section 1 of AML makes clear, the employer's duties include consulting the employee on matters concerning the design of the employee's work situation. Chap. 6, Sections 4 and 9 of AML contain rules on the participation of safety delegates and safety committees in the procurement of devices, e.g. PPE. Where the choice of PPE is concerned, it is particularly important that consultation should precede decision-making. An employee who helped to choose the equipment, will be correspondingly more motivated for using it.

Many of the Provisions of the National Board of Occupational Safety and Health include special rules on the use of PPE. See App. 1.

Further information on the choice of PPE is contained in *Boken om personlig skyddsutrustning*² (order ref. no. H227), published by the National Board of Occupational Safety and Health, and in the handbook *Din personliga skyddsutrustning*³ (order ref. no. H349), in preparation at the Work Environment Authority.

The extent to which the necessary protection against an actual risk can be achieved by means of PPE depends on the risk level. The latter needs to be assessed, in order for the right choice of protective equipment to be possible. Different forms of hearing protectors for example, have different attenuation, and the attenuation is limited. Eye protectors, safety shoes and safety helmets afford only a limited measure of mechanical protection, as evidenced by the testing provisions for each type of protective equipment.

² "The PPE book"

³ "Your personal protective equipment", published in 2003

The following are among the things needing to be taken into account in order for the risks to be identifiable:

- working routines,
- work equipment,
- workplace design,
- duration of the work,
- the physical and mental load which the work entails,
- thermal climate,
- the extent and frequency of the risk,
- the particular conditions prevailing in the workplace,
- individual factors on the part of the wearer.

It is very often a good idea to use a checklist to ensure that all risks have been identified. Sometimes assistance may be needed, e.g. from the occupational health services.

Any change in the working process may necessitate the choice of other PPE. It is also important to keep oneself informed of new products on the market which may have superior properties to the equipment currently available.

Guidance on Section 6

It is important that PPE should be of such a kind and used in such a way that it will not create new elements of risk. It is also important to choose equipment which can be put on and taken off easily.

High-visibility warning clothing needs to be adapted to lighting conditions. At workplaces illuminated, for example, with sodium lamps, the right choice of colour for the warning clothing is especially important.

Eye protectors limiting the field of vision or safety shoes with unsuitable soles for the activity in question are instances of equipment which can create additional risks at work.

Certain materials in the equipment may, on coming into contact with skin, trigger or give rise to allergy or other hypersensitivity in sensitive persons. This applies, for example, to gloves made of rubber or chromium-tanned leather, and spectacle frames, buttons and buckles containing nickel.

The protective function is the most important characteristic of PPE, but, as far as safety permits, it is important to aim for maximum comfort, so that the equipment will impede the wearer as little as possible. Power assisted filtering devices are one example of equipment where the breathing resistance of respiratory protection equipment has been reduced to a minimum.

PPE often requires individual fitting. The fact of a respiratory protection device, for example, being type tested and approved does not guarantee that it will fit every face. Sometimes different makes and/or sizes of protective equipment

may need to be tested in order for the intended protective effect and a reasonable degree of comfort to be achieved.

When supplying PPE, it is important to take into account different people's individual circumstances and limitations, e.g. the different conditions applying to women and men as a result of differences in body measurements and physical strength. It is also important for equipment and its use to be adapted when necessary to suit employees with functional impairment.

Guidance on Section 7

PPE which can very well be used by more than one person includes, for example, high-visibility harnesses.

Guidance on Section 8

PPE can be designed for a multiplicity of functions. If so it is essential that each item of equipment should afford adequate protection, e.g. if a combination of safety helmet, hearing protectors and respiratory protective equipment is used.

If the employee has to wear glasses, the frames may sometimes be of such a size and shape as to prevent ear muffs or a full face mask from fitting closely to the skin. This can render the protection inadequate, especially if a high standard of protection is needed.

Guidance on Section 9

Where certain kinds of respiratory protection equipment are concerned, the weight of the equipment, breathing resistance and also mental workload can necessitate special measures, such as lightening the physical workload by technical means, such as a lifting device, or inserting breaks.

Breaks may also be needed from work imposing a heavy load through the use of impervious clothing, such as chemical protection suits or supplementary clothing for the exclusion of heat or cold, e.g. during work at furnaces or in cold stores.

The employment of minors for work in surroundings entailing such exposure to a hazardous substance that respiratory equipment is needed is prohibited, other than on certain conditions. See the Provisions of the National Board of Occupational Safety and Health on Minors at Work.

Guidance on Sections 10-12

It is important that the employer verify that the information supplied to the employee concerning the equipment is properly understood. It is also important for the employee to have understood the contents of the instructions for use. It is an advantage if buyer and warehouseman can also be included in the briefing. It is important to inform the person who will be using the PPE that

its protective effect may be reduced or eliminated if it is used for a purpose other than that for which it is intended.

Using the equipment can be variously complicated and difficult to learn. Practical testing of the equipment may sometimes be necessary, and very often the employer needs to issue written instructions for use.

Chap. 3, Section 2 of AML makes the employer responsible for the proper maintenance of safety equipment, among other things. Decontamination, washing and other cleaning of PPE is part of its maintenance. Where protection from cold is concerned, maintenance can, for example, mean the drying of damp protective clothing. When protective clothing, for example, has been seriously contaminated by a chemical, there may be cause to consider the wisdom of letting the washing water escape down the drain.

Maintenance needs vary considerably from one type of PPE to another. In some cases – respiratory protective equipment and fall protective equipment, for example – specially organised maintenance may be called for. It is important that routines should be worked out for the care and storage of PPE, e.g. according to the effects of harmful substances and ageing in storage. Rules may be needed, among other things, on the discarding of equipment. Routines for this can be organised after consultations between the employer and the employees, e.g. within the safety committee. It may, for example, be appropriate for the equipment to be marked and/or made unusable when discarded, so as to prevent its inadvertent or ill-advised reuse.

It is essential that employees should handle the protective equipment with care, take good care of it, be vigilant in case its protective effect deteriorates and replace it correctly after use. After cleaning, certain protective equipment may need to be placed in a special storage device so as not to be affected by air contaminants. It is also essential that the employer be informed without delay of any deterioration in the efficacy of the protective equipment.

It is important that firm routines should be in place for the maintenance, inspection, repair and storage of PPE. Briefly, the employees will in this way be given to know:

- why, when, where and how the equipment is to be used,
- what type of equipment is to be used,
- where the equipment can be collected,
- when and how the equipment is to be cleaned,
- how the equipment's efficacy is to be checked,
- when maintenance is needed and when the equipment needs to be replaced,
- where to obtain spares, and
- where and how the equipment is to be stored.

App. 1 List of Provisions and General Recommendations containing special rules on use of PPE.

		Helmet	Fall prot.	Eye prot.	Gloves	Clothing	Ear prot.	Resp. prot.	Foot/leg prot.
AFS 1981:5	Dust explosions					o			
AFS 1981:14	Protection against Injuries Due to Falls		o						
AFS 1981:15	Protection against Injuries Due to Falling Objects	o							
AFS 1981:18	Gangways on Tower Cranes		o						
AFS 1982:20	Restaurants and Other Catering Establishments				o	o	o		o
AFS 1984:2	Cartridge-operated Fixing Guns			o			o		
AFS 1984:15	Sewer Systems	o	o	o	o	o	o	o	o
AFS 1985:1	PCB			o	o	o		o	o
AFS 1985:4	Chimney-sweeping			o	o	o	o	o	o
AFS 1985:18	Hairdressing Work				o				
AFS 1986:5	Injection Moulding Machines			o	o	o			
AFS 1986:11	Shunting Work				o	o			o
AFS 1986:13	Oils				o	o			
AFS 1986:18	Dock Work	o			o	o			
AFS 1986:23	Protection against Bloodborne Infections			o	o	o		o	
AFS 1986:24	Trucks								o
AFS 1986:26	Shipyard Work		o		o	o		o	o
AFS 1986:29	Spray Painting			o	o	o	o	o	
AFS 1986:30	Hand-held Circular Saws for Woodworking			o			o		
AFS 1987:18	Grinding Machines and Grinding Tools			o					
AFS 1988:4	Lead Batteries			o					
AFS 1988:6	Wood Mould					o		o	
AFS 1989:2	Hazardous Waste			o	o	o	o	o	o
AFS 1989:7	Mercury and Amalgam			o	o			o	
AFS 1989:8	Fish Cage Farms					o			o
AFS 1990:9	Synthetic Inorganic Fibres				o	o			o
AFS 1990:11	Work with Experimental Animals				o	o		o	o
AFS 1990:18	Care and Assistance in Private Homes				o	o		o	
AFS 1991:2	Work Involving Infection Risks			o	o	o		o	
AFS 1991:6	Maintenance of Technical Devices			o		o		o	
AFS 1992:7	Inorganic Surface Treatment			o	o	o		o	
AFS 1992:9	Welding and Thermal Cutting			o	o	o	o	o	
AFS 1992:10	Noise						o		
AFS 1992:16	Quartz							o	
AFS 1992:17	Lead					o		o	
AFS 1992:18	Motor Fuels		o		o	o		o	
AFS 1992:20	Liquid Manure		o					o	

AFS 1993:3	Work in Confined Spaces		o	o				o	
AFS 1993:57	Diving Work					o		o	
AFS 1994:8	Laser			o					
AFS 1994:11	Organic Dust in Agriculture							o	
AFS 1994:54	Use of High Pressure Water Jet Equipment	o		o					o
AFS 1995:1	Firefighting in Smoke and Chemical Environment	o	o		o	o		o	o
AFS 1996:4	Thermosetting Plastics			o	o	o		o	
AFS 1996:7	Design of Personal Protective Equipment	o	o	o	o	o	o	o	o
AFS 1996:13	Asbestos					o		o	
AFS 1997:2	Work in Intense Heat			o		o			
AFS 1997:3	Rock Work	o				o			o
AFS 1997:5	Metal Smelting and Die-casting	o		o	o	o	o	o	o
AFS 1997:7	Gases		o	o	o	o		o	o
AFS 1997:10	Laboratory work with chemicals			o	o	o			
AFS 1997:12	Biological Substances			o	o	o		o	
AFS 1998:2	Work in Cold Premises in Food Processing Industries	o			o	o	o		o
AFS 1998:6	Pesticides			o	o	o		o	o
AFS 1998:8	The Motor Industry			o	o	o	o	o	o
AFS 1999:3	Building and Civil Engineering work	o	o	o	o	o	o	o	o
AFS 1999:11	Cytostatics and other drugs with enduring toxic effects			o	o	o		o	
AFS 2000:2	Chainsaws and Bush Saws	o		o	o	o	o		o
AFS 2000:4	Chemical Hazards in the Working Environment			o	o	o			
AFS 2000:5	Contained use of genetically modified micro organisms			o	o	o		o	
AFS 2000:6	Mast and pole work	o	o	o	o	o			o
Medd. 1974:4	Storage Facilities for Bulk Goods		o					o	

Information from the Work Environment Authority

Other rules applicable

The Work Environment Act, AML (SFS 1977:1160)

The Work Environment Ordinance (SFS 1977:1166)

Provisions etc. issued by the National Board of Occupational Safety and Health

AFS 1996:1 Minors at Work

AFS 1996:7 Design of Personal Protective Equipment

AFS 1999:3 Building and Civil Engineering Work

Provisions etc. issued by the Work Environment Authority

AFS 2001:1 Systematic Management of the Work Environment

Other publications

Boken om personlig skyddsutrustning⁴ (H227)

⁴ "The PPE book".