

Event Management – Personal Protective Equipment

Introduction

During some phases of the event, individuals may be exposed to chemical, physical, biological or environmental hazards. Informa aims to ensure that where persons are exposed to hazards, they are provided with, and trained in the use of, Personal Protective Equipment (PPE). PPE needs should be identified during an appropriate risk assessment where it is used as a last means of controlling the hazard.

1. Personal Protective Equipment (PPE)

1.1 What is PPE?

PPE is defined as "all equipment (including clothing affording protection against the weather) which is intended to be worn or held by a person at work and which protects him against one or more risks to his health or safety".

1.2 Assessment of Risk

When performing any task involving potential hazards to an individual, a suitable and sufficient risk assessment should be carried out.

When considering measures to control the hazard, the following points **MUST** be considered:

- Can the hazard be removed?
- Can a less risky option (procedure/substance) be used instead?
- Can exposure to the hazard be reduced?
- Can the hazard be controlled so that PPE is not required?

1.3 The Selection of PPE

PPE must be suitable for the activity and conditions in which it will be used and taking into account the needs of the individual who will be using it. The following aspects should be taken into consideration when selecting PPE:

- Meeting national safety standards for PPE
- Protection given and compatibility with other PPE should it be required capability of PPE to fit the individual concerned
- Ergonomic and health requirements of the individual using the PPE
- PPE should be specific to each individual and they should be consulted during the selection process.

1.4 Information, instruction and training

Users of PPE must be made aware of and instructed in:

- the risks present and why the PPE is needed
- when the PPE is to be used;
- how the PPE is used;
- how to examine for and report faults in the PPE;
- procedures in the event of failure of PPE.

For low risk hazards involving simple pieces of PPE, this training will generally be conducted by a competent person "on the job". The most frequently used pieces of PPE during event construction (build up and breakdown) are safe footwear and high visibility jackets. Also, safety gloves, helmets and disposable masks may be required according to the hazards present (see Appendix 1 – typical event PPE requirements).

1.5 Maintenance, testing and replacement

All PPE must be:

- checked for defects on a regular basis
- cleaned where necessary after use and maintained in a hygienic fashion;
- stored in appropriate accommodation
- and replaced if lost or damaged

Should the conditions in which the PPE is used alter, a review should be conducted, and the PPE changed if necessary.

Internal safety inspections must include examination and use of PPE.

2. Guidance on the selection of PPE

The following sections provide more detailed information on selection of specific PPE:

2.1 Foot protection

Safety footwear is required if there is the risk of:

- penetration with sharp objects e.g. nails on the event floor
- crush or impact injuries e.g. items falling, moving vehicles
- contamination with harmful substances;
- slipping.

e.g. safety boots



e.g. safety shoes



The appropriate safety footwear should be selected in each instance, e.g. anti-slip footwear if the floor is slippery floors; steel toe-capped boots protect against dropped objects or crush injuries; Midsole protection protects against puncture or penetration if you tread on a nail.

In areas where any foot injury may be sustained, sandals, open toe shoes or bare feet ARE NOT acceptable.

2.2 Body protection

High visibility protective clothing should be worn to protect against hazards such as moving vehicles or to identify certain key contacts e.g. emergency coordinator on site.

Any individuals who may work at a height should consider the need to wear fall restraint or fall arrest equipment.

e.g. Fall arrest harness



e.g. High visibility vest



2.3 Head protection

Hard hats and other head protection may be needed to protect the wearer from falling objects and col-lapsing structures.

In situations where overhead work is taking place it is preferable to prevent work taking place underneath and to create a barrier around this area for the duration of this work to prevent access. In emergency situations where it is not possible to prevent work taking place below working at a height, head protection must be worn by individuals.

Examples of this situation include overhead rigging, work on high level service systems, electrical work.

e.g. hard hat



1.4 Hand protection

Gloves should be worn when handling:

- hazardous materials;
- toxic chemicals;
- corrosive materials;
- materials with sharp or rough edges; and
- very hot or very cold materials.

N.B. It is recommended that latex gloves are not used because latex can cause allergic skin responses.

Where the use of latex cannot be avoided, then only “Non-Powdered Latex Gloves” should be used.

Selecting gloves for use with chemicals

Where contact with hazardous chemicals is identified, the risk assessment may identify the need for gloves.

When handling small quantities of chemicals for short periods of time, disposable vinyl or nitrile examination gloves are generally sufficient to protect against most accidental splashes or contact.

If there is going to be greater length of time in contact with or immersion in the substance, gloves should be carefully selected based upon their chemical compatibility and degradation time.

Other aspects to be taken into account when selecting gloves are:

- dexterity requirements;
- size; and
- latex allergy

Before use, gloves should be examined for defects that may affect performance.

During use, do not touch anything else (such as hair, door handles etc.) other than the materials needing to be handled as this causes contamination.

Following use, disposable gloves should be removed carefully, peeling the first one off such that it is reversed. Use the inside of the first glove to remove the second glove. At no time should you touch the outside of the glove with your bare hand.

e.g. safety gloves



1.5 Respiratory protective equipment (RPE)

Respiratory protection may be required if the following materials are in the air:

- Gases, vapours and fumes e.g. from paint solvents, glue solvents

- Dusts and aerosols e.g. from cutting wood, MDF

RPE must be selected carefully to ensure it gives adequate protection. The following aspects should be taken into account:

- the toxicity of the agent
- the size of the particle
- the amount of movement involved in the task and working conditions
- the individual, e.g. face shape, presence of beard, glasses etc. and
- the occupational exposure limit of the substance and contaminant levels.

There are many forms of respirators available however it is likely that a disposable respirator would be the type used on an event construction site if protection is needed against dusts or solvent vapours.

Advice should be sought if other forms of protection are required.

The main factors affecting fit are:

- **face size and shape** - a majority of face pieces are only available in one size but people are much more variable. Face size and shape vary with build, ethnic origin, sex, age and so on. It is unreasonable to expect one tight-fitting device to fit everyone. In selecting and purchasing RPE, it is important to seek information and advice from manufacturers and suppliers about the range of sizes available. Where a wearer cannot achieve a good fit, you should consider alternative types of RPE which do not rely on a face seal for their effectiveness (e.g. those incorporating hoods).
- **facial hair** - a good face seal will only be obtained if the skin in the region of the seal is smooth and without hair. Facial hair tends to lift the mask off the face and permit inward leakage of contaminated air. This is also true for beard stubble. The size of the leakage depends on the extent of the hair (stubble can be worse than a full beard), the work rate and the type of device being worn, but it always results in lower protection being provided.

RPE wearers must be trained in the use of the equipment, how to wear it and what its limitations are.

e.g. disposable respirator



2.6 Eye and face protection

Face and eye protection must be worn when there is a danger of chemical splashing, sparks, lasers etc.

Protection comes in the form of:

Safety spectacles - like normal spectacles but tougher lens material with side shields to prevent impact from flying debris. The lenses in these may be corrective if required.

Safety goggles - these are completely sealed around the eye area. Also impact resistant and should be used if there is the possibility of splashes from chemicals. The lenses cannot be made corrective although normal spectacles may be worn under them.

e.g. safety glasses



e.g. safety goggles



2.7 Hearing protection

Noise at work can cause hearing loss which can be temporary or permanent. People often experience temporary deafness after leaving a noisy place. Although hearing recovers within a few hours, this should not be ignored. It is a sign that if you continue to be exposed to the noise your hearing could be permanently damaged.

Permanent hearing damage can be caused immediately by sudden, extremely loud, explosive noises.

Hearing protection should be issued to colleagues as a short-term measure or while other methods of controlling noise are being implemented.

Use of hearing protection

- make sure the protectors give enough protection
- select protectors which are suitable for the working environment – consider how comfortable and hygienic they are;
- think about how they will be worn with other protective equipment (e.g. hard hats, dust masks and eye protection);

Maintenance

You will need to make sure that hearing protection works effectively and check that:

- it remains in good, clean condition;
- earmuff seals are undamaged;
- the tension of the headbands is not reduced;
- there are no unofficial modifications;
- compressible earplugs are soft, pliable and clean.

Selection of hearing protection

Protection must be selected to provide sufficient noise attenuation from the frequencies to which the worker is exposed. Ear protection comes in the form of:

Ear plugs - which fit inside the ear canal, may not be suitable for people with a history of ear problems.

Canal caps - soft rubber caps attached to a headband which presses them into the openings of the ear canal.

Ear muffs - Hard plastic cups with sound absorbent filling which fit over the ears and are sealed to the head by cushions. They are pressed to the head by means of a head band or some special fittings attached to some types of safety helmet.

If verbal communication is required whilst ear protection is being worn, some suitable system must be put in place. Taking hearing protectors off even for a brief period of time when noise levels are high can result in damage to hearing.

e.g. ear plugs










Correct use



Incorrect Use



Appendix 1: Guide to Typical Event Personal Protective Equipment (PPE) requirements

Hazard	Advice	PPE	examples
<ul style="list-style-type: none"> Slippery surfaces Nails and sharp objects on the floor Heavy items dropped during movement or fitting 	<p>Safe footwear should be worn to prevent slipping and foot injuries.</p> <p>Safe footwear is mandatory during the construction activities of buildup/breakdown.</p>	<p>Safe footwear</p> <p>To be approved to ISO 20345 or equivalent</p>	
<ul style="list-style-type: none"> Moving vehicles Vehicle/pedestrian inter-action Poor visibility 	<p>Hi-visibility vests have highly reflective properties and a colour that stands out from any background.</p>	<p>High visibility vest/jacket</p> <p>To be approved to ISO 20471 or equivalent</p>	 <p><a :http:="" a="" href="http://www." www.<=""></p>
<ul style="list-style-type: none"> Danger of falling objects or overhead work taking place. 	<p>A hard hat should be worn to protect the head if an object falls from a height</p>	<p>Hard hat</p> <p>Approved to ISO 3873 or equivalent</p>	
<ul style="list-style-type: none"> Person working at a height 	<p>Persons working at height where there are no guard rails e.g. close to a live edge, should be clipped onto a strong anchorage point wearing fall restraint or fall arrest equipment.</p>	<p>Fall restraint or fall arrest equipment</p> <p>Approved to ISO10333 or equivalent</p>	
<ul style="list-style-type: none"> Contact with hazardous chemicals. Dirty workplace Handling sharp objects Objects being moved (trapping). 	<p>Protect hands from harm using appropriate type of gloves (consider glove material, dexterity needs, performance).</p>	<p>Safety gloves</p> <p>Approved to ISO 374 (chemicals) and EN388 (cuts) or equivalent</p>	
<ul style="list-style-type: none"> Inhalation of dust, gas or fumes 	<p>Protect the body from breathing or ingesting hazardous materials.</p>	<p>Respirator</p> <p>Approved to EN 149 FFP2 or equivalent</p>	
<ul style="list-style-type: none"> Impact with moving objects Eye contact with chemicals 	<p>Protect eyes using suitable glasses.</p>	<p>Safety glasses or goggles</p> <p>Approved to EN 166 1F or equivalent</p>	
<ul style="list-style-type: none"> Loud noise 	<p>Protect ears from noise using appropriate type of device with the correct level of hearing protection (attenuation).</p>	<p>Ear plugs</p> <p>Approved to EN 352 or equivalent</p>	