

Protect yourself

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The Personal Protective Equipment (PPE) at work regulations and guidance notes set out accepted principles for use of protective equipment where the risk cannot be controlled by technical means.

Equipment must be designed and manufactured to standards defined by the Personal Protective Equipment (EC Directive) Regulation 1992 (S.I. No 3139).

The Regulations DO NOT APPLY where specific requirements for COSHH, Lead, Asbestos, Ionising Radiations, Noise and Construction (Head Protection) have effect. Old legislation is repealed in favour of the new regulations, including in particular The Protection of Eyes Regulations.

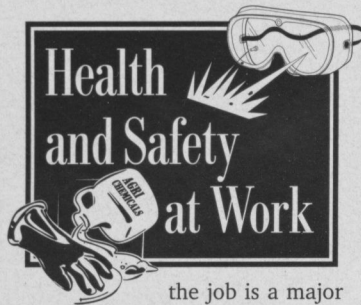
GENERAL REQUIREMENTS

- PPE does not include overalls, uniform or ordinary work clothes (Reg 2)
- PPE may only be used when technical measures are not effective (Reg 4.1)
- PPE must be suitable to the individual, appropriate for the risk, AND comply with EC Standards (Reg 4)
- Combinations of PPE to be compatible for use together (Reg 5)
- Employers must make assessments of equipment to determine suitability (Reg 6)
- Employers must ensure PPE is in good repair and hygienic condition (Reg 7)
- Appropriate accommodation must be provided to store PPE not in use (Reg 8)
- Information, Instruction and training must be given to all PPE users (Reg 9)
- Employees must take reasonable care in using PPE and report defects (Regs 1- & 11)

The Guidance Note indicates activities where personal protection should be provided, with information on maintenance, storage and replacement criteria.

INTRODUCTION

Working Clothes: The wearing of sensible clothing suitable for



the job is a major aid to safety. People working at moving machinery should take precautions against items of apparel getting trapped, and gloves, long sleeves or clothing with loose or torn ends should not be worn near machinery. Long hair should be protected by suitable headgear. Loose ties, scarves, key chains, jewellery – including bracelets and rings – have caused serious accidents by becoming entangled in machinery. Footwear should be “sensible” and kept in good repair.

Protective Clothing: Special clothing to give protection against a particular hazard should not be used as a substitute for other methods of dealing with the danger. For example, at drilling machines and polishing machines with exposed rotating spindles where there is a risk of hair entanglement the aim should be to eliminate the risk by proper guarding and not to rely on suitable head coverings being worn.

In all cases, protective clothing must be selected to match the nature of the hazard. Comfort of the wearer, though important is secondary to the level of protection as a selection criterion. Information on protection levels is available from manufacturers and suppliers of Protective Equipment.

British Standards: The British Standards Institution prepares standards for products and issues licences to manufacturers only after thorough inspection, and testing of individual products. Manufacturers awarded licences are required to display one or both of the following certification marks on all products for which the relevant licenses have been issued:

- The Kitemark gives assurance that a product complies in all respects with the requirements of the relevant British Standard.
- The Safety Mark gives assur-

ance that a product complies with the safety aspects of a British Standard, or a British Standard concerned mainly with safety.

Marking: From 30 June 1995 virtually all PPE should carry a C.E. Mark.

Up to that date, the relevant British Standard will continue to apply. After 30 June 1995 only PPE marked with C.E. should be purchased. Most manufacturers will display the old BS Kite Mark and the new C.E. Marking.

Older PPE purchased before 30 June 1995 can still be used providing it is still suitable for the use it is being put. In all instances a reputable supplier should be used for all PPE requirements.

But do not forget the PPE should only be used as a last resort.

BASIC EQUIPMENT

Safety Footwear: The provision and wearing of safety boots or shoes to comply with BS 1870: Part 1: 1956 (amended) and 953 is not obligatory under the Factories Act 1961, but in some circumstances their use may be reasonably practicable under the Health and Safety at Work Etc Act 1974. In foundries, the Foundries (Protective Footwear and Gaiters) Regulations, 1971 lay down a general requirement to protect the feet against burns and impact risks.

Some government establishments, and industrial and commercial undertakings have made the wearing of safety footwear a condition of employment for persons employed within certain defined areas of work.

Eye Protection: As with all forms of protective equipment, eyes protection must be selected on the basis of the hazard being guarded against.

The main hazards to the eyes are impact of particles, dust, chemical splashes, molten metal, gases, radiation and laser beams.

Eye protection must conform to British Standard 2092 and will be marked accordingly on both the lens and housing with “BS 2092”.

Suffix letters indicate the type of hazard protection. C, D, G on the housing of goggles indicate protection against Chemical Splash, Dust and Gas respectively,

M on lens and housing indicates protection against Molten Metal. In addition, a suffix number on lens and housing indicates the degree of impact protection, with Grade 1 affording greater protection than Grade 2. Grade 1 impact protection is available only with goggles or face shields; spectacles offering protection only to general purpose and impact Grade 2 standards.

Filters for use during welding or similar industrial operations should comply with BS679 for optical qualities and exposure to heat, moisture and ultra violet radiation. BS1542 deals with equipment for eye, face and neck protection against radiation arising during welding or similar operations; it includes spectacles, goggles and face shields and helmet with minimum requirements for thermal conductivity, electrical insulation and size of filters.

Eye Irrigation: Chemicals or gases in the eyes are best removed by a copious supply of clean filtered cold water, (cold to reduce the pain of burning) in a manner which can be administered by the injured person himself, or by a colleague.

Hand Protection: Gloves are available which will protect the hands from cuts, punctures, heat and chemical burns, electric shock, irritants and contaminants. The type of glove will depend on the hazards involved. (It is important to remember that gloves should not be used at moving machines, eg. drilling machines).

Protection against grazes when handling materials if offered by simple leather and/or cotton gloves or gloves made of PVC supported fabric. Gloves with rubberised palm/fingers are available to assist where objects are slippery. Protection against extremes of temperature is provided by cloths of insulating materials. Rubber gloves manufactured to BS697 will provide protection against electric shock when working on live systems. Synthetic rubber (neoprene and nitrile) gloves are available in various grades to give protection against a range of chemical hazards.

Limited protection against irritant and degreasing chemicals is offered by a range of barrier

creams. When barrier creams are removed, the application of an "after work" cream may be advisable to prevent drying and chapping of skin.

Protective Headwear: This area is covered by The Construction (Head Protection) Regulations 1989, making it mandatory for hard hats to be worn during construction work wherever there is a risk of injury to the head. There are two types of safety helmet available, these are the broad brim pattern (or "hat"), and helmet having a peak at the front only (or "cap"). The four main kinds of material used in their manufacture are fibre glass, aluminium alloy, phenolic resin laminated material and various plastic materials. Appearance and weight are factors to be considered although the main consideration must be the risk against which they are supplied. These risks include:

■ Abnormal heat where aluminium alloy is perhaps best, but where laminated or fibre glass helmets may be satisfactory.

■ Falling objects and debris, and sideways crushing for instance between two bogies in mining where high peripheral rigidity would possibly afford the best protection.

"Bump Caps" are also available which superficially resemble safety helmets. They must not be confused with helmets because they offer no protection against impact from falling objects, their function is simply to protect against bumping the head, for example, in a vehicle inspection pit.

Other types of head protection are security guard helmets, which also offer impact protection to the back of the neck and caps and snoods, which contain long hair, for example in food manufacturing or machining operations.

RESPIRATORY PROTECTION

Respirators: Respirators are designed to filter out the contaminants from workplace air. Various types are available:

■ Disposable, light simple face masks are available to protect against nuisance dust. They offer a low level of protection and are bit effective for dusts in high concentration, or for toxic dusts.

■ Cartridge type respirators are also mainly of the ori-nasal type and give protection against low concentrations of certain relatively non-toxic gases and vapours. Cartridges must be specific to the hazard present, and must be changed at appropriate intervals to maintain protection.

■ Canister type respirators incorporate a full face piece, connected by a tube to a replaceable

canister which is carried by a sling on the back or side of the wearer. These respirators give considerably more protection than the cartridge type against larger concentrations of certain specified toxic gases or vapours, generally of 1% concentration or less. It is imperative always to select the correct canister for use against any particular gas, and to make sure that it is not used for longer than the manufacturers recommended maximum effective life (about 30 to 45 minutes). Both cartridge and canister respirators can be fitted with particular filters to give protection against various combinations of dust and vapour. + Positive pressure powered dust respirators are connected by a tube to a battery operated suction unit, carried by the wearer in a harness. The air is drawn by the suction unit through the filters and fed to the face piece at a controlled flow.

The ori-nasal face piece may be replaced by a full face piece, or various hoods or blouses.

The excess of air escaping around the side of the face piece prevents leakage inwards and helps to keep the operator cool during strenuous work. They are used mainly against toxic dusts.

HEARING PROTECTORS

Hearing protectors should be provided in accordance with the Noise at Work Regulations 1989. They should be regarded as a short term measure until noise can be reduced at source or by environmental control, and regular inspections should be carried out to ensure that they remain effective. The need for protectors should be fully explained and instruction should be given in their use and care. The TUC recommend joint consultation before protectors are issued. Ear protectors include:

■ Permanent reusable ear plugs of soft rubber, or plastic bungs, which are fitted into the ear canal. These plugs including "universal fitting" types should be initially fitted to the individual by the trained person, who should instruct the user on the correct method of inserting the plugs. The plug should be kept clean by regular washing.

■ Disposable ear plugs from mineral down (or 'acoustic wool') which is extremely fine glass down, or from waxed cotton wool. These are intended to be used only once and then thrown away.

■ High hysteresis expanding foam disposable plugs. These mount to fit exactly the ear canal.

■ Semi-insert protectors (canal caps), made of soft rubber.

■ Ear muffs. These are hard cups

which fit over the ear and are sealed to the head with soft cushion seals. They have several advantages compared with ear plugs one size will fit most people, more protection is usually provided, and they are easy to remove and replace, which is an advantage for people who frequently move from a noisy place to a quiet place. It is possible to include ports or valves which can be manually opened during quiet periods, or an electronic device which permits passage of low intensity signals without attenuation. However, they tend to make the ears hot, and are bulky so that they are rather inconvenient if slipped around the neck when not in active use. All type of ear muffs are likely to be damaged, and it is an advantage if individual parts, especially the seals, can be replaced separately and easily, either at the work place or on the premises.

■ Other types of ear protectors, such as amplitudes sensitive and frequency selective types.

PERSONAL BODY PROTECTION

There are no general requirements relating to protective garments or clothing under the Factories Act 1961. Certain items of clothing are, however, required by Regulations or Orders made under the Act; there is no corresponding provision in the Offices, Shops and Railway Premises Act.

When protective clothing is necessary, attention should be given to selecting the right type for the required purpose. Where different types of equipment are available, work people should be consulted, encouraged to try them out and state their preferences.

If work people play a part in selection, they will be more likely to cooperate in using the clothes. Persons required to use it should be told why the clothing is provided and when they ought to wear it.

In some cases there is a requirement for protection in wet conditions, for instance that provided by waterproof aprons, or suitable overalls for dirty or potentially dangerous dust work; or where there is a danger from acids, oils, caustic substances or other hazardous chemicals, suitable overalls which may need to be chemical resistant must be provided. Additionally in a few instances head covering may be required. Suitable arrangements should

be made for the care, maintenance and storage of protective clothing. Where dangerous dusts exits, such as asbestos, more details of the items to be supplied are set out in the Regulations. With some categories of clothing it is most important that great care is exercised in handling contaminated garments which are being removed or changed.

Clothing to give protection against intense heat is sometimes required and there are various materials available for this purpose.

■ Further information on training courses and consultancy contact ATB-Landbase Training Services (Jean John on 01282 617466 or Tony Rees on 01686 622799).

