



SUPPLEMENT No. 3
TO
THE SOVEREIGN BASE AREAS GAZETTE
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SUBSIDIARY LEGISLATION

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No. 63

THE HEALTH AND SAFETY AT WORK ORDINANCE 1999
(Ordinance 6 of 1999)

REGULATIONS MADE UNDER SECTION 38.

In exercise of the powers vested in him by section 38 of the Health and Safety at Work Ordinance 1999^(a) and of all other powers enabling him in that behalf, the Administrator hereby makes the following Regulations:-

Citation

1. These Regulations may be cited as the Health and Safety at Work (Use of Work Equipment) Regulations 2002.

PART I – GENERAL PROVISIONS

Interpretation

2. – (1) In these Regulations unless the context otherwise requires:-
- “competent authority” means the Minister of Labour and Social Insurance of the Republic;
 - “competent person” means any person with the requisite experience and knowledge for the safe performance, control and inspection of the work to be carried out;
 - “danger zone” means any zone within or around work equipment in which an exposed employee is subject to a risk to his safety;
 - “exposed employee” means an employee situated wholly or partially in a danger zone;
 - “guided load” means a load which is moving on a guided track;
 - “maintenance” includes planned servicing, regular maintenance, including cleaning, and repairs;
 - “maintenance log” means a document in which details of all maintenance of a specific item of work equipment used in the undertaking or establishment are recorded;
 - “operator” means any employee who is assigned the task of using work equipment;
 - “the Ordinance” means the Health and Safety at Work Ordinance 1999;
 - “use of work equipment” means any activity involving work equipment, such as starting or stopping the equipment, its use, transport, modification or maintenance.
- (2) In these Regulations, unless the context otherwise requires:-
- (a) any reference to a numbered regulation or a numbered Schedule shall be a reference to the regulation or Schedule so numbered in these Regulations;
 - (b) any reference to a numbered paragraph shall be a reference to the paragraph so numbered in the regulation or Schedule in which it appears.

^(a) Ordinance 6 of 1999.

Application

3. - (1) These Regulations prescribe the minimum health and safety requirements for the use of work equipment by employees.

(2) These Regulations shall apply to a self-employed person as they apply to an employer and an employee and as if that self-employed person were both an employer and an employee, except that regulation 11 (consultation and participation) shall not apply to a self-employed person.

PART II – EMPLOYERS’ OBLIGATIONS

General obligations

4. – (1) Every employer shall take the measures necessary to ensure that the work equipment made available to employees in the undertaking or establishment:-

- (a) is suitable for the work to be carried out or properly adapted for that purpose; and
- (b) may be used by employees without impairment to their health or safety.

(2) In selecting the work equipment which he proposes to use, the employer shall pay attention to:-

- (a) the specific conditions and characteristics of the work and to the existing hazards, in particular at the workstations, for the health and safety of his employees; and
- (b) any additional hazards posed by the use of the work equipment in question.

(3) Where it is not possible to ensure that work equipment can be used by employees without risk to their health or safety, the employer shall take appropriate measures to minimise such risks.

Rules concerning work equipment

5. –(1) Without prejudice to regulation 4 every employer shall obtain and use work equipment which:-

- (a) if provided to employees in the undertaking or establishment for the first time after the commencement of these Regulations, complies with:-
 - (i) the provisions of any relevant existing legislation; and
 - (ii) the minimum requirements laid down in Schedule 1, to the extent that no other legislation is applicable or is only partially applicable; or
- (b) if provided to employees prior to the commencement of these Regulations, complies with the said minimum requirements by the 1st January 2003.

(2) Every employer shall take the measures necessary to ensure that, throughout its working life, work equipment is kept, by means of adequate maintenance, at a level such that it complies with paragraph (1)(a) or (1)(b), as the case may be.

(3) Every employer shall take the measures necessary to ensure that procedures are established whereby a level of safety can be attained which corresponds to the level of safety indicated in Schedule 2.

Inspection

6. -(1) Every employer shall ensure that where the safety of work equipment depends on the installation conditions, the equipment is inspected:-

- (a) after installation and before being put into service for the first time; and
- (b) after assembly at a new site or in a new location, to ensure that the work equipment has been installed correctly and is safe to operate.

(2) For the purposes of paragraph (1), the placement, erection, connection with other sources and co-ordination with other work equipment shall be considered as installation conditions on which the safety of work equipment may depend.

(3) Every employer shall ensure that work equipment which is exposed to conditions causing deterioration which is liable to result in dangerous situations is inspected:-

- (a) periodically and, where appropriate, tested periodically; and
- (b) whenever exceptional circumstances which are liable to jeopardise the safety of the work equipment have occurred, such as modification work, accidents, natural phenomena or prolonged periods of inactivity,

to ensure that health and safety conditions are maintained and that any deterioration can be detected and remedied in good time.

(4) For the purposes of paragraph (3), significant mechanical fatigue and fatigue due to exposure to physical or chemical agents shall be indicative of the conditions causing deterioration which are liable to result in dangerous situations.

(5) All inspections and tests under this regulation shall be carried out by competent persons in accordance with:-

- (a) relevant legislation;
- (b) the instructions of the manufacturer; and
- (c) the norms of scientific investigation.

(6) After carrying out any inspection or test under this regulation, the competent person shall issue a certificate stating:-

- (a) the work equipment concerned may be operated safely;
- (b) the measures which must be taken to improve the level of safety of the equipment; or
- (c) use of the equipment shall be prohibited.

(7) Every employer shall ensure that the results of any inspection and test carried out under this regulation are:-

- (a) recorded in a maintenance register for the work equipment used in the undertaking or establishment or in the relevant maintenance log, where one exists; and
- (b) kept at the disposal of the competent authority, for at least 10 years from the date of the relevant inspection.

(8) Where the work equipment is to be used outside the establishment or undertaking, the employer shall ensure that it is accompanied by physical evidence that the last inspection (and, where appropriate, the last test) required to be carried out under this regulation has been carried out.

Work equipment involving specific risks

7. Where the use of work equipment is likely to involve a specific risk to the safety of any employee, the employer shall take the measures necessary to ensure that:-

- (a) the use of that work equipment is restricted to those employees given the task of using it; and
- (b) the carrying out of any modification or maintenance of that work equipment is restricted to those employees who have been specifically designated to carry out such work.

Ergonomic principles and occupational health

8. The working posture and position of employees while using work equipment and ergonomic principles shall be taken fully into account by every employer when applying the minimum health and safety requirements imposed by these Regulations.

Information and instructions for employees

9. -(1) Without prejudice to any other health and safety legislation concerning the provision of information to employees, every employer shall take the measures necessary to ensure that employees in the undertaking or establishment have at their disposal adequate information and, where appropriate, written instructions on the work equipment used at work.

(2) The information and written instructions referred to in paragraph (1) shall contain adequate health and safety information concerning:-

- (a) the conditions of use of the work equipment;
- (b) foreseeable abnormal situations; and
- (c) any conclusions to be drawn from experience, where appropriate, of using the work equipment.

(3) Employees must be made aware of any dangers relevant to them, work equipment present in their immediate work area or site, and any changes affecting them, in as much as they affect work equipment situated in their immediate work area or site, even if they do not use such equipment themselves.

(4) The information and written instructions provided pursuant to this regulation must be readily comprehensible to those employees concerned.

Training of employees

10. Without prejudice to any other health and safety legislation concerning the provision of training to employees, every employer shall take the measures necessary to ensure that:-

- (a) those employees given the task of using work equipment receive adequate training, including training on any hazards which such use may entail;

- (b) those employees referred to in regulation 7(b) receive adequate specific training.

Consultation and participation of employees

11. Every employer shall consult and permit the participation of his employees or their representatives in relation to the matters covered by these Regulations in accordance with any provisions in the Ordinance or any Regulations made thereunder concerning the consultation and participation of employees.

SCHEDULE 1

(Regulation 5(1) and (2))

MINIMUM REQUIREMENTS FOR WORK EQUIPMENT**General**

1. -(1) The obligations laid down in this Schedule shall apply having regard to the provisions of regulations 1 to 11, where the corresponding hazard exists for the work equipment concerned.

(2) The following minimum requirements, in as much as they apply to work equipment in use prior to the commencement of these Regulations, do not necessarily call for the same measures as the essential requirements concerning new work equipment.

**PART A - GENERAL MINIMUM REQUIREMENTS
APPLICABLE TO WORK EQUIPMENT**

2. -(1) Work equipment control devices which affect safety must be:-

- (a) clearly visible;
- (b) clearly identifiable; and
- (c) appropriately marked, where necessary.

(2) Except where necessary for certain control devices, control devices must be located outside danger zones and in such a way that their operation cannot cause any additional hazards.

(3) Control devices must not give rise to any hazard as a result of any unintentional operation.

(4) Where necessary from the main control position, the operator must be able to ensure that no person is present in the danger zones and where this is not possible, an audible or visible warning signal must be given automatically, whenever the machinery is about to start.

(5) Exposed employees must have the time and the means to avoid hazards caused by the starting or stopping of the work equipment.

(6) Control systems must be safe and must be chosen making due allowance for the failures, faults and constraints to be expected in the intended circumstances of use.

3. -(1) It must be possible to start work equipment by deliberate action only, using a control provided for the purpose.

(2) Subject to subparagraph (3) below, it must be possible:-

- (a) to restart work equipment after a stoppage, for whatever reason;
- (b) to make a significant change to the operating conditions of the work equipment (such as speed and pressure),

by deliberate action only, using a control provided for the purpose, unless such a restart or change will not subject exposed employees to any hazard.

(3) Subparagraph (2) above shall not apply to any restart or any significant change in operating conditions which occurs as a result of the normal operating cycle of an automatic device.

4. -(1) All work equipment must be fitted with a control to stop it completely and safely.

(2) Each workstation must be fitted with a control to stop some or all of the work equipment, depending on the type of hazard, so that the equipment is rendered in a safe state.

(3) The equipment's stop control must have priority over the start controls.

(4) When the work equipment or the dangerous parts of it have stopped, the energy supply of the actuators concerned must be switched off.

5 Where appropriate, and depending on the hazards the equipment presents and its normal stopping time, work equipment must be fitted with an emergency stop device.

6. - (1) Work equipment presenting hazards due to falling objects or projections must be fitted with appropriate safety devices corresponding to such hazards.

(2) Work equipment presenting hazards due to emissions of gas, vapour, liquid or dust must be fitted with appropriate containment devices or extraction devices near to the sources of the hazard.

7. Work equipment and parts of such equipment must be stabilised where necessary for the safety of employees, by clamping or some other means.

8. Where there is a risk of rupture or disintegration of parts of the work equipment which is likely to pose a significant danger to the safety of employees, appropriate protection measures must be taken.

9. -(1) Where there is a risk that employees may come into contact with moving parts of work equipment which could lead to injury, guards or protection devices must be fitted to:-

- (a) prevent access to those areas where such contact is possible; or
- (b) bring the moving parts automatically to a standstill whenever employees try to gain access to the danger zone.

(2) The guards or protection devices fitted pursuant to subparagraph (1) above must:-

- (a) be of robust construction;
- (b) not give rise to any additional hazard;
- (c) not be easily removed or rendered inoperative;
- (d) be situated at a sufficient distance from the danger zone;
- (e) not restrict, more than necessary, the view of the operating cycle of the equipment; and

(f) allow modification and maintenance work to be carried out but restrict access to those areas where such work is to be carried out and, if possible, enable such work to be carried out without the removal of the guard or protection device, as the case may be.

10. Work equipment must be suitably lit, having regard to the operation to be carried out.

11. Work equipment parts which are operated at high or very low temperatures must be guarded, where appropriate, to avoid the risk of employees coming into contact with or coming too close to such parts.

12. Warning devices on work equipment must be unambiguous and easily perceived and understood.

13. Work equipment may be used only for those operations and under those conditions for which it is appropriate.

14. - (1) Where possible, work equipment must be designed or adapted to enable maintenance work to be carried out whilst the equipment is shut down.

(2) Where it is not possible to carry out maintenance work whilst the work equipment is shut down, it must be possible to take appropriate protection measures for the carrying out of such work or for such work to be carried out outside the danger zones.

(3) Where there is a maintenance log for the specific item of work equipment, it must be kept up to date.

15. - (1) All work equipment must be fitted with clearly identifiable means to isolate it from all its energy sources.

(2) Reconnection to energy sources must pose no risk to the employees concerned.

16. Work equipment must bear those warnings and markings which are essential to ensure the safety of employees.

17. Employees must be provided with a safe means of access to, and be able to remain safely in, all the work areas necessary for production, adjustment and maintenance work involving the work equipment.

18. All work equipment must be designed or adapted so as to protect employees against the risks of:-

- (a) the equipment catching fire or overheating; and
- (b) any discharges of gas, dust, liquid, vapour or other substances produced, used or stored in such work equipment.

19. All work equipment must be designed or adapted to prevent the risks of explosion of:-

- (a) the equipment itself; and
- (b) any substances produced, used or stored in the work equipment.

20. All work equipment must be designed or adapted to protect exposed employees against the risk of direct or indirect contact with electricity.

**PART B - MINIMUM REQUIREMENTS FOR MOBILE
WORK EQUIPMENT, WHETHER OR NOT
SELF-PROPELLED**

21. Work equipment with ride-on workers must be fitted out in such a way as to reduce the risks for workers during the journey, including the risks of contact with or trapping by wheels or tracks.

22.- (1) Where an inadvertent seizure of the drive unit between an item of mobile work equipment and its accessories or anything towed might create a specific risk, such work equipment must be equipped or adapted to prevent blockages of the drive units.

(2) Where such seizure cannot be avoided, every possible measure must be taken to avoid any adverse effects on employees.

23. Where drive shafts for the transmission of energy between mobile items of work equipment can become soiled or damaged by trailing on the ground, facilities must be available for cleaning or fixing them.

24. - (1) Subject to subparagraph (4) below, mobile work equipment on which employees may ride must be adapted or equipped so as to reduce, under actual conditions of use, the risk of:-

- (a) partial or total equipment roll-over; and
- (b) injuries, in particular crushing injuries, to the employees, in the event of such an occurrence.

(2) The adaptations made or equipment provided for the purposes of subparagraph (1) above must include:-

- (a) a feature to prevent the equipment from tilting by more than a quarter turn; or
- (b) features which ensure that if the equipment can tilt by more than a quarter turn:-
 - (i) employees who may be crushed are restrained in their positions; and
 - (ii) sufficient clearance is maintained between the ground and those parts of the equipment which surround the ride-on employees,

in the event that the equipment does roll-over.

(3) Compliance with subparagraph (1) above shall not be required where the work equipment is stabilised during operation or where the design of such equipment makes roll over impossible.

25. - (1) Fork-lift trucks which carry one or more employees must be adapted or equipped to reduce, under actual conditions of use, the risk of:-

- (a) the fork-lift truck overturning; and
- (b) injuries, in particular, crushing injuries to the employees, in the event of such an occurrence.

(2) The adaptations made or equipment provided for the purposes of subparagraph (1) above must include:-

- (a) an enclosure for the driver; and
- (b) a feature which prevents the fork-lift truck from overturning; or
- (c) features which ensure that, if the fork-lift truck can overturn:-

- (i) the employees are restrained in their seats; and
- (ii) sufficient clearance is maintained between the ground and those parts of the fork-lift truck which surround the employees being carried,

in the event that the fork-lift truck does overturn.

26. Self-propelled work equipment which may, in motion, engender hazards for employees must fulfil the following conditions:-

- (a) the equipment must have facilities for preventing unauthorised start-up;
- (b) it must have appropriate facilities for minimising the consequences of a collision where there is more than one item of track-mounted work equipment in motion at the same time;
- (c) there must be a device for braking and stopping equipment;
- (d) where safety constraints so require, emergency facilities operated by readily accessible controls or automatic systems must be available for braking and stopping equipment, in the event of failure of the main facility;
- (e) where the driver's direct field of vision is not adequate to ensure safety, adequate auxiliary devices must be installed to improve visibility;
- (f) work equipment designed for use at night or in dark places must be equipped with lighting which is appropriate to the work to be carried out and which will ensure the equipment can be used safely;
- (g) work equipment which, either on its own or in respect of whatever it is towing or carrying, constitutes a fire hazard which is liable to endanger employees, must be equipped with appropriate fire-fighting appliances where such appliances are not available close to the place of use;
- (h) remote-controlled work equipment must stop automatically once it leaves the control range; and
- (i) remote-controlled work equipment which may in normal conditions give rise to a crushing or impact hazard must have facilities to guard against the risk of such an occurrence, unless other appropriate devices are present to control it.

PART C - MINIMUM REQUIREMENTS FOR WORK EQUIPMENT FOR LIFTING LOADS

27. - (1) Where work equipment for lifting loads is to be installed on a permanent basis, its strength and stability during use must be assured, having regard, in particular, to the loads to be lifted and the stress which will be induced at the mounting or fixing point of the structures.

(2) Machinery for lifting loads must be clearly marked to indicate its nominal load, and where appropriate, a load plate must be affixed, giving the nominal load for each configuration of the machinery.

(3) Accessories for lifting must be marked in such a way that it is possible to identify the characteristics essential for safe use.

(4) Work equipment which is not designed for lifting persons but which might be so used in error must be appropriately and clearly marked to this effect.

(5) Work equipment which is to be installed on a permanent basis must be installed in such a way as to reduce the risk of the load:-

- (a) striking employees;
- (b) drifting dangerously or falling freely;
- (c) being released unintentionally.

(6) Work equipment for lifting or moving employees must be such as to:-

- (a) prevent the risk of the car falling, where one exists, by suitable devices;
- (b) prevent the risk of the user himself falling from the car, where one exists;
- (c) prevent the risk of the user being crushed, trapped or struck, in particular through inadvertent contact with objects;
- (d) ensure that persons trapped in the car in the event of an incident are not exposed to danger and can be freed.

(7) If, for reasons inherent in the site and height differences, the risks referred to in subparagraph (6)(a) above cannot be avoided by any safety measures, an enhanced safety coefficient suspension rope must be installed and checked every working day.

SCHEDULE 2

(Regulation 5(3))

PROVISIONS CONCERNING THE USE OF WORK EQUIPMENT**General**

1. The obligations laid down in this Schedule shall apply, having regard to regulations 1 to 11, where the corresponding hazard exists for the work equipment in question.

PART A - GENERAL PROVISIONS FOR ALL WORK EQUIPMENT

2. - (1) Work equipment must be installed, located and used in such a way as to reduce hazards to users of the work equipment and to other employees, for example by ensuring that there is sufficient space between the moving parts of work equipment and fixed or moving parts in its environment and that all forms of energy and substances used or produced can be supplied or removed in a safe manner.

3. Work equipment must be erected and dismantled under safe conditions, in particular, employees must observe any instructions which may have been furnished by the manufacturer.

4. Work equipment which may be struck by lightning while being used must be protected by devices or other appropriate measures, against the effects of lightning.

PART B - PROVISIONS CONCERNING THE USE OF MOBILE EQUIPMENT, WHETHER OR NOT SELF-PROPELLED.

5. Self-propelled work equipment must be driven only by employees who have been appropriately trained in the safe driving of such equipment.

6. Where work equipment is moving around in a work area, appropriate traffic rules must be drawn up and observed.

7. - (1) Organisational measures must be taken to prevent employees on foot from coming within the area of operation of self-propelled work equipment.

(2) Where work can be done properly only if employees on foot are present within the area of operation of self-propelled work equipment, appropriate measures must be taken to prevent them from being injured by the equipment.

8. - (1) The transport of employees on mechanically driven mobile work equipment shall be permitted only where the appropriate facilities are provided to ensure their safety.

(2) Where work must be carried out during the journey, speeds must be adjusted as necessary.

9. Mobile work equipment with a combustion engine may not be used in working areas unless sufficient quantities of air can be guaranteed to ensure there is no resultant risk to the health or safety of employees.

PART C - PROVISIONS CONCERNING THE USE OF WORK EQUIPMENT DESIGNED FOR LIFTING LOADS

General

10. Work equipment which is mobile or can be dismantled and which is designed for lifting loads must be used in such a way as to ensure the stability of the work equipment during use under all foreseeable conditions, taking into account the nature of the ground.

11. - (1) Subject to subparagraph (2) below, employees may be lifted only by means of work equipment and accessories designed and provided for this purpose.

(2) Without prejudice to section 13(1) of the Ordinance, exceptionally, work equipment which is not specifically designed and provided for the purpose of lifting persons may be so used, where:-

- (a) suitable and sufficient instructions and supervision are provided for such exceptional use; and
- (b) the equipment is used:-
 - (i) in accordance with those instructions; and
 - (ii) under that supervision.

(3) While employees are on work equipment designed for lifting loads, the control position must be manned at all times.

(4) Employees being lifted must be provided with a reliable means of communication.

(5) In the event of danger, there must be a reliable means of evacuating them.

12. - (1) Unless required for the effective operation of the work, measures must be taken to ensure that employees are not present under suspended loads.

(2) Subject to subparagraph (3) below, suspended loads may not be moved above unprotected workplaces usually occupied by employees.

(3) Where work cannot be carried out properly in any other way, appropriate procedures must be laid down and applied to ensure the safety of the exposed employees.

13. - (1) Lifting accessories must be selected on the basis of the loads to be transported, gripping points, attachment tackle and the atmospheric conditions, having regard to the mode and configuration of slinging.

(2) Lifting accessory tackle must be clearly marked so that users are aware of its characteristics, where such tackle is not dismantled after use.

(3) Lifting accessories must be stored in a way that ensures that they will not be damaged or degraded.

Work equipment designed for lifting non-guided loads

14. Where two or more items of work equipment designed for lifting non-guided loads are installed or erected on a site in such a way that their working radii overlap, appropriate measures must be taken to avoid collision between loads or the items of work equipment during use.

15. When using mobile work equipment designed for lifting non-guided loads:-

- (a) measures must be taken to prevent the equipment from tilting, overturning or, if necessary, moving or slipping; and
- (b) checks must be made to ensure that these measures are executed properly.

16. Where the operator of work equipment designed for lifting non-guided loads cannot observe the full path of the load either directly or by means of auxiliary equipment which provides the necessary information:-

- (a) a competent person must be in communication with the operator to guide him; and
- (b) organizational measures must be taken to prevent collisions of the load which could endanger employees.

17. Work must be organised in such a way that when an employee is attaching or detaching a load by hand, it can be done safely, in particular, by the employee retaining direct or indirect control of the work equipment.

18. - (1) All lifting operations must be:-

- (a) properly planned;
- (b) appropriately supervised; and
- (c) properly carried out,

in order to protect the safety of employees.

(2) Where a load has to be lifted by two or more pieces of work equipment designed for lifting non-guided loads simultaneously, a procedure must be established and applied to ensure good coordination on the part of the operators.

19. - (1) Where work equipment designed for lifting non-guided loads cannot maintain its hold on the load in the event of a complete or partial power failure, appropriate measures must be taken to avoid exposing employees to any resultant risks.

(2) Suspended loads must not be left unobserved unless access to the danger zone is prevented and the load has been temporarily halted and is safely held.

20. - (1) Open-air use of work equipment designed for lifting non-guided loads must be halted immediately when meteorological conditions deteriorate to the point of jeopardizing the safe use of the equipment and exposing employees to risks.

(2) Adequate protection measures, in particular, to avoid work equipment turning over, must be taken to avoid any risks to employees.

Dated this 18th day of July 2002.

By the Administrator's Command,

D.J. BONNER,

Chief Officer,

Sovereign Base Areas.

No. 64

THE HEALTH AND SAFETY AT WORK ORDINANCE 1999

(Ordinance 6 of 1999)

REGULATIONS MADE UNDER SECTION 38.

In exercise of the powers vested in him by section 38 of the Health and Safety at Work Ordinance 1999^(a) and of all other powers enabling him in that behalf, the Administrator hereby makes the following Regulations:-

PART I – GENERAL PROVISIONS**Citation**

1. These Regulations may be cited as the Health and Safety at Work (Chemical Agents) Regulations 2002.

Interpretation

2. – (1) In these Regulations, unless the context otherwise requires:-

“activity involving chemical agents” means any work in which chemical agents are used, or are intended to be used, in any process, including production, handling, storage, transport or disposal and treatment, or which result from such work;

“biological limit value”, in relation to any chemical agent, means the limit of the concentration in the appropriate biological medium of that agent, its metabolite, or an indicator of effect;

“chemical agent” means any chemical element or compound, on its own or admixed, as it occurs in a natural state or as produced, used or released, including released as waste, by any work activity, whether or not produced intentionally and whether or not placed on the market;

“hazardous chemical agent” means any chemical agent which:-

- (a) falls within one of the categories of danger specified in column 1 of Schedule 4, by virtue of it having the property specified in the corresponding entry in column 2 of that Schedule; or
- (b) whilst not meeting the criteria for classification as hazardous in accordance with sub-paragraph (a) above, may constitute a risk to the health and safety of any employee because of its physico-chemical, chemical or toxicological properties and the manner in which it is used or is present in the workplace, including any chemical agent assigned an occupational exposure limit value under regulation 4;

“health surveillance” means the examination of any employee so as to determine his state of health in relation to his exposure to specific chemical agents at work;

^(a) Ordinance 6 of 1999.

“occupational exposure limit value”, in relation to any chemical agent, means, unless otherwise specified, the limit of the time-weighted average of the concentration of that agent in the air within the breathing zone of any employee in relation to a specified reference period;

“the Ordinance” means the Health and Safety at Work Ordinance 1999;

“risk” means the likelihood that the potential for harm will be realised under the conditions of use or conditions of exposure, or both;

“risk assessment” means an assessment made pursuant to regulation 5(1).

(2) In these Regulations, unless the context otherwise requires, any reference to:-

- (a) a numbered regulation or a numbered Schedule is a reference to the regulation or Schedule so numbered in these Regulations;
- (b) a numbered paragraph is a reference to the paragraph in the regulation or Schedule in which it appears.

Application

3. – (1) Subject to paragraph (2), these Regulations shall apply to and in relation to any work activity involving any chemical agent, with a view to protecting employees against risks to their health and safety arising, or likely to arise, from exposure to any such agent.

(2) These Regulations shall apply without prejudice to:-

- (a) the provisions contained in any legislation concerning protection from radiation, such as X-rays;
- (b) any more stringent or specific provisions contained in the Health and Safety at Work (Carcinogenic and Mutagenic Agents) Regulations 2002 ^(a); and
- (c) any more stringent or specific provisions contained in any legislation concerning the transport of hazardous chemical agents.

(3) Where any duty is imposed by these Regulations on any employer in respect of his employees, he shall, so far as is reasonably practicable, be under a like duty in respect of any other person, whether at work or not, who may be affected by the work carried on by the employer, except that the duties of an employer:-

- (a) under regulations 11 (health surveillance) and 12 (consultation and participation of employees) shall not extend to persons who are not his employees; and
- (b) under regulation 10 (information and training for employees) shall not extend to persons who are not his employees, unless those persons are on the premises where the work is being carried on.

(4) These Regulations shall apply to a self-employed person as they apply to an employer and an employee and as if such self-employed person were both an employer and an employee, except that regulations 11 and 12 shall not apply to a self-employed person.

^(a) P.I. 65 of 2002

Limit values

4. - (1) The occupational exposure limit value for each of the chemical agents listed in Column 1 of Schedule 1 is specified in the corresponding entry for each such agent in Column 4 of that Schedule.

(2) The biological limit value for certain chemical agents and the health surveillance required to be carried out in relation thereto are specified in Schedule 2.

(3) The Chief Officer may, by order to be published in the Gazette, prescribe standardised methods for the measurement and assessment of workplace air concentrations in relation to the occupational exposure limit values.

PART II - EMPLOYERS' OBLIGATIONS

Assessment of risks to health and safety

5. - (1) Every employer shall:-

- (a) determine whether any hazardous chemical agent is present in the workplace; and
- (b) where any such agent is present make an assessment of any risk to the health and safety of any employee (hereinafter referred to as a "risk assessment") arising from any such presence, for the purpose of identifying the measures which he must take to comply with the requirements and prohibitions imposed upon him by these Regulations.

(2) The employer shall review the risk assessment, in particular, where:-

- (a) there have been significant changes which could render it out of date; or
- (b) the results of health surveillance show it to be necessary.

(3) When making or reviewing a risk assessment, the employer shall take into account the following matters:-

- (a) the hazardous properties of the chemical agents present;
- (b) the information on health and safety which must be provided by the supplier of the chemical agents in accordance with any relevant legislation, including relevant safety data sheets;
- (c) the level, type and duration of exposure to the chemical agents;
- (d) the circumstances of work involving the chemical agents, including the quantities involved;
- (e) any relevant occupational exposure limit values or biological limit values;
- (f) the effects of prevention measures taken or to be taken; and
- (g) where available, the conclusions to be drawn from any health surveillance already undertaken.

(4) The employer shall obtain any additional information which is needed for the risk assessment from the supplier or from other

readily available sources and, where appropriate, this information shall comprise a specific assessment of the risk to users, established on the basis of European Union legislation on chemical agents.

(5) The risk assessment shall be:-

- (a) documented in a suitable form and in accordance with any relevant legislation and practice and, where appropriate, shall include a justification by the employer that the nature and extent of the risks related to chemical agents make a further detailed risk assessment unnecessary; and
- (b) kept in the employer's possession.

(6) Certain activities within the undertaking or establishment, such as maintenance, in relation to which it is foreseeable that there is a potential for significant exposure or which may result in deleterious effects to health and safety for other reasons, even after all technical measures have been taken, shall be included in the risk assessment.

(7) Where the employer determines that several hazardous chemical agents are present, the risks to health arising or which are likely to arise from exposure to such agents shall be assessed on the basis of the risk presented by all such chemical agents in combination.

(8) In the case of any new activity involving any hazardous chemical agent, work shall only commence after:-

- (a) the risk assessment has been made; and
- (b) all prevention measures identified have been implemented.

(9) The Chief Officer may, by order to be published in the Gazette, provide practical guidelines for the determination and assessment of risk and for their review and, where necessary, their adjustment.

Prevention measures to eliminate or reduce risks

6. - (1) Every employer shall take the necessary prevention measures to ensure that the risks to the health and safety of employees involving hazardous chemical agents are eliminated or reduced to a minimum by:-

- (a) designing and organising appropriate systems of work;
- (b) providing suitable equipment for work with chemical agents and appropriate maintenance procedures;
- (c) reducing to a minimum the number of employees exposed or likely to be exposed;
- (d) reducing to a minimum the duration and intensity of exposure;
- (e) providing appropriate hygiene facilities;
- (f) reducing the quantity of chemical agents present at the workplace to the minimum required for the type of work concerned;
- (g) providing suitable working procedures, including suitable arrangements for the safe handling, storage and transport within the workplace of hazardous chemical agents and waste containing such chemical agents.

(2) The Chief Officer may, by order to be published in the Gazette, provide practical guidelines for prevention measures to control risk.

Application of regulations 8, 9 and 11

7. Regulations 8, 9 and 11 shall not apply where:-

- (a) the results of the risk assessment show that the quantity of a hazardous chemical agent present in the work place is such that there is only a slight risk to the health or safety of any employee; and
- (b) the measures taken pursuant to regulation 6 are sufficient to reduce that risk.

Specific protection and prevention measures

8. – (1) Where the nature of the activity so permits, the risk to health and safety identified in the risk assessment shall be eliminated by substitution, whereby the employer shall avoid the use of a hazardous chemical agent by replacing it with a chemical agent or process which, under its condition of use, is not hazardous or is less hazardous to the health and safety of employees, as the case may be.

(2) Where the nature of the activity does not permit the risk referred to in paragraph (1) to be eliminated by substitution, having regard to the activities and the risk assessment, the employer shall ensure that such risk is reduced to a minimum by application of protection and prevention measures which are consistent with the risk assessment.

(3) The measures referred to in paragraph (2) shall include, in order of priority:-

- (a) the design of appropriate work processes and engineering controls and use of adequate equipment and materials, so as to avoid or minimise the release of hazardous chemical agents which may present a risk to the health or safety of employees;
- (b) the application of collective protection measures at the source of the risk, such as adequate ventilation and appropriate organisation measures;
- (c) where exposure cannot be prevented by other means, application of individual protection measures, including personal protective equipment.

(4) The measures referred to in paragraph (2) shall be accompanied by health surveillance in accordance with regulation 11, where it is appropriate to the nature of the risk.

(5) Unless the employer clearly demonstrates by other means of evaluation that, in accordance with paragraphs (2) and (3), adequate prevention and protection have been achieved, such employer shall carry out:-

- (a) on a regular basis; and
- (b) when any change occurs in the conditions which may affect employees' exposure to chemical agents,

such measurements of chemical agents which may present a risk to their health or safety as are necessary, in particular in relation to the occupational exposure limit values.

(6) The employer shall take into account the results of the procedures referred to in paragraph (5) in carrying out the obligations laid down in or resulting as a consequence of the risk assessment.

(7) In any event, where an occupational exposure limit value has been exceeded, the employer shall immediately take steps, taking into account the nature of that limit, to remedy the situation by carrying out prevention and protection measures.

(8) On the basis of the overall assessment of and general principles for the prevention of risks provided for in regulations 5, 6 and 7, the employer shall take technical or organisational measures or both, as appropriate to the nature of the operation, including the storage, handling and segregation of incompatible chemical agents, providing protection of employees against hazards arising from the physico-chemical properties of chemical agents.

(9) In particular, the measures taken pursuant to paragraph (8) shall include, in order of priority, measures:-

- (a) to prevent the presence at the workplace of hazardous concentrations of inflammable substances or hazardous quantities of chemically unstable substances;
- (b) where the nature of the work is such that the employer cannot avoid the presence at the workplace of hazardous concentrations of such substances, to avoid the presence of ignition sources which could give rise to fires and explosions or adverse conditions which could cause chemically unstable substances or mixtures of substances to give rise to harmful physical effects;
- (c) to mitigate the detrimental effects to the health and safety of employees in the event of any fire or explosion due to the ignition of inflammable substances or harmful physical effects arising from chemically unstable substances or mixtures of substances.

(10) Work equipment and protective systems provided by the employer for the protection of his employees pursuant to these Regulations shall comply with any relevant legislation concerning design, manufacture and supply with respect to health and safety.

(11) Any technical or organisation measures taken by the employer shall take account of and be consistent with any equipment group categorisation in any legislation concerning the provision of equipment and protective systems intended for use in potentially explosive atmospheres.

(12) The employer shall take measures to provide:-

- (a) sufficient control of plants, equipment and machinery;
- (b) explosion suppression equipment; or
- (c) explosion pressure relief arrangements.

Accidents, incidents and emergencies

9. – (1) Without prejudice to any provisions in the Ordinance and any Regulations made thereunder concerning first aid, fire fighting and evacuation of employees in serious and imminent danger, the employer shall prepare action plans which can be put into effect in the event of any accident, incident or emergency arising out of the presence of any hazardous chemical agent, for the purposes of ensuring that appropriate action is taken.

(2) The action plans referred to in paragraph (1) shall include:-

- (a) arrangements for relevant safety drills, which must be performed at regular intervals; and
- (b) the provision of appropriate first-aid facilities.

(3) When an event such as is referred to in paragraph (1), occurs, the employer shall take steps immediately to:-

- (a) mitigate the effects of the event; and
- (b) inform the employees concerned.

(4) Following the steps taken pursuant to paragraph (3), the employer shall ensure that:-

- (a) the appropriate measures are implemented to remedy the situation as soon as possible;
- (b) only those employees who are essential to the carrying out of repairs and other necessary work are allowed to work in the affected area;
- (c) every employee who is allowed to work in the affected area is provided with appropriate:-
 - (i) protective clothing;
 - (ii) individual protective equipment; and
 - (iii) specialised safety equipment and plant,
 which he must use as long as the situation persists (which situation must not be permanent); and
- (d) no unprotected employee is allowed to remain in the affected area.

(5) Without prejudice to the provisions in other legislation referred to in paragraph (1), the employer shall take the necessary measures to provide the warning and other communication systems required to:-

- (a) signal an increased risk to health or safety;
- (b) enable an appropriate response to be made; and
- (c) launch remedial actions, assistance, escape and rescue operations immediately if the need arises.

(6) The employer shall ensure that:-

- (a) information on emergency arrangements involving hazardous chemical agents is available; and
- (b) the relevant internal and external accident and emergency services have access to this information.

(7) The information required by paragraph (6) shall include:-

(a) advance notice of:-

- (i) relevant work hazards,
- (ii) hazard identification arrangements,
- (iii) precautions; and
- (iv) procedures,

so that the emergency services can prepare their own response procedures and precautionary measures; and

(b) any available information concerning specific hazards arising, or likely to arise, at the time of an accident, incident or emergency, including information on any procedures prepared pursuant to this regulation.

Information and training for employees

10. – (1) Without prejudice to any provisions in the Ordinance and any Regulations made thereunder concerning the provision of information and training for employees, the employer shall ensure that:-

(a) his employees or their representatives or both are provided with:-

- (i) the data obtained pursuant to regulation 5 and any changes in such data resulting from any major alteration at the workplace;
- (ii) information on the hazardous chemical agents present in the workplace, such as:-
 - (aa) the identity of those agents;
 - (bb) the risks to health and safety arising from their presence;
 - (cc) the relevant occupational exposure limit values; and
 - (dd) other relevant legislative provisions;
- (iii) training and information on appropriate precautions and actions to be taken in order to safeguard themselves and other employees at the workplace;
- (iv) access to any safety data sheet provided by the supplier pursuant to any relevant legislation; and

(b) such information is:-

- (i) provided in a manner appropriate to the results of the risk assessment, which manner may vary from oral communication to individual instruction and training supported by information in writing, depending on the nature and degree of the risk revealed by the risk assessment; and
- (ii) updated to take account of changing circumstances.

(2) Without prejudice to any provisions in the Ordinance and any Regulations made thereunder concerning the labelling of chemical

agents and the provision of safety signs at the workplace, the employer shall ensure that:-

- (a) the contents of any containers and pipes used for hazardous chemical agents;
- (b) the nature of those contents; and
- (c) any associated hazards,

are clearly identifiable.

Health surveillance

11. – (1) Without prejudice to the provisions of the Ordinance and any Regulations made thereunder concerning health surveillance, where, the results of the risk assessment reveal a risk to the health of any employee, the employer shall ensure that appropriate health surveillance of such employee is carried out.

(2) Health surveillance, the results of which shall be taken into account in applying prevention measures in the workplace, shall be appropriate where:-

- (a) the exposure of the employee to a hazardous chemical agent is such that an identifiable disease or adverse health effect may be related thereto;
- (b) there is a likelihood that the disease or health effect may occur under the particular conditions of the employee's work;
- (c) there are validated techniques for detecting indications of the disease or effect; and
- (d) the technique to be used presents a low risk to the health of the employee.

(3) Health surveillance shall be compulsory in relation to any employee engaged in work with any hazardous chemical agent in respect of which a biological limit value has been set and shall be carried out in accordance with the procedures specified in Schedule 2.

(4) Employees shall be informed of the requirement in paragraph (3) before being assigned to any work involving risk of exposure to any hazardous chemical agent in respect of which a biological limit value has been set.

(5) Where health surveillance of any employee is carried out pursuant to paragraph (1), the employer shall ensure that:-

- (a) an individual health and exposure record is made for that employee and kept up-to-date, which record shall be kept in a suitable form, so as to permit later consultation at a later date, taking into account any confidentiality;
- (b) on his request, an employee is given access to the record which relates to him personally;
- (c) on his request, a copy of any such record is given to the Chief Inspector; and
- (d) in the event that the employer's undertaking ceases, all such health and exposure records are given to the Chief Inspector.

(6) The health and exposure record required by paragraph (5) shall include a summary of:-

- (a) the results of the health surveillance carried out; and
- (b) any monitoring data representative of the exposure of that employee.

(7) Biological monitoring and any related requirements may form part of any health surveillance carried out pursuant to paragraph (1).

(8) Where, as a result of the health surveillance, it is found that any employee is suffering from an identifiable disease or an adverse health effect, which is considered by a medical practitioner or any health-care professional to be the result of exposure to a hazardous chemical agent at the workplace or any relevant biological limit value has been exceeded:-

- (a) the employee concerned shall be:-
 - (i) informed by the medical practitioner or other suitably qualified person of the result which relates to him personally; and
 - (ii) provided with information and advice in relation to any health surveillance which he should undergo following the end of the exposure; and
- (b) the employer shall:-
 - (i) review the risk assessment;
 - (ii) review the measures provided to eliminate or reduce the risks to health and safety pursuant to regulations 6, 7 and 8;
 - (iii) take into account the advice of the occupational health-care professional or other suitably qualified person, the Chief Inspector or any Inspector, when implementing any measures required to eliminate or reduce risk pursuant to regulation 8, including the possibility of assigning the employee to alternative work where there is no risk of further exposure; and
 - (iv) arrange for continued health surveillance and provide for a review of the state of health of any other employee who has been similarly exposed.

(10) Where a review of the state of health of other exposed employees is carried out pursuant to paragraph 9(b)(iv), the medical practitioner or the occupational health-care professional, the Chief Inspector or any Inspector may propose that those exposed employees undergo a medical examination.

Consultation and participation of employees

12. The employer shall consult and permit the participation of his employees or their representatives or both in relation to the matters covered by these Regulations in accordance with any provisions of the Ordinance and any Regulations made thereunder concerning the consultation and participation of employees.

PART III - OBLIGATIONS OF PRODUCERS AND SUPPLIERS

Provision of information by producers and suppliers

13. Where an employer requires any information concerning any hazardous chemical agent, for the purpose of making the risk assessment, the producer or supplier of that chemical agent shall provide the employer, on request, with all such information.

PART IV - MISCELLANEOUS PROVISIONS

Prohibitions relating to certain chemical agents and activities

14. - (1) The production, manufacture or use at work of each of the chemical agents listed in Column 1 of the table in Part A of Schedule 3 shall be prohibited to the extent specified in the corresponding entry for each such agent in Column 2 of that table.

(2) The carrying out of any of the activities specified in Part B of Schedule 3 shall be prohibited to the extent specified in relation to each such activity in the said Part B.

(3) The prohibitions imposed by paragraph (1) in relation to any of the chemical agents referred to therein shall not apply where the chemical agent is present in another chemical agent or as a constituent of waste, provided that its individual concentration in such other agent or waste, as the case may be, is less than the limit specified for that agent in the table referred to in the said paragraph (1).

Authorisation of production etc. of prohibited chemical agents and activities

15. - (1) Notwithstanding, regulation 14, the Chief Inspector may authorise any employer to produce, manufacture or use any of the chemical agents or carry out any of the activities referred to in Schedule 3 beyond the extent specified therein, in any of the following circumstances:-

- (a) for the sole purpose of scientific research and testing, including analysis;
- (b) for any activity intended to eliminate any chemical agent that is present in the form of a by-product or a waste product;
- (c) for the production of any such chemical agent for use as an intermediate and for such use.

(2) The exposure of employees to any of the chemical agents referred to in regulation 14 shall be prevented, in particular, by providing that the production and earliest possible use of any such chemical agent as an intermediate must take place in a single closed system, from which the said chemical agent may be removed only to the extent necessary to monitor the process or service the system.

(3) Any employer who wishes to obtain an authorisation from the Chief Inspector pursuant to paragraph (1), shall submit an application to that effect in writing, together with the following information:-

- (a) the reason for requesting such authorisation;
- (b) the quantity of the chemical agent to be used annually;
- (c) the activities and reactions or processes involved;

- (d) the number of employees liable to be involved in the activity;
- (e) the precautions envisaged to protect the health and safety of the employees concerned;
- (f) the technical and organisation measures taken to prevent the exposure of any employees.

(5) For the purposes of determining whether to grant an authorisation pursuant to paragraph (1), the Chief Inspector may require the employer to provide such additional information as he deems necessary.

(6) The Chief Inspector may impose a time limit upon any authorisation granted by him pursuant to paragraph (1) and may attach a condition thereto, requiring the employer to take appropriate prevention measures to protect the health and safety of his employees.

SCHEDULE 1
(Regulations 2(1), 4, 5(3)(e) and 8)
OCCUPATIONAL EXPOSURE LIMIT VALUES

Column 1 Name of Agent	Column 2 EINECS No ⁽¹⁾	Column 3 CAS No ⁽²⁾	Column 4 Limit Values				Column 5 Notation ⁽³⁾
			Eight Hours ⁽⁴⁾		Short Term ⁽⁵⁾		
			mg/m ³ ⁽⁵⁾	ppm	mg/m ³	ppm	
(2-Methoxymethylethoxy)-propanol	252-104-2	34590-94-8	308	50	-	-	Skin
1,1,1-Trichloroethane	200-756-3	71-55-6	555	100	1110	200	-
1,1-Dichloroethane	200-863-5	75-34-3	412	100	-	-	Skin
1,2,3-Trimethylbenzene	208-394-8	526-73-8	100	20	-	-	-
1,2,4-Trimethylbenzene	202-436-9	95-63-6	100	20	-	-	-
1,2,4-Trichlorobenzene	204-428-0	120-82-1	15,1	2	37,8	5	Skin
1,2-Dichlorobenzene	202-425-9	95-50-1	122	20	306	50	Skin
1,4-Dichlorobenzene	203-400-5	106-46-7	122	20	306	50	Skin
1-Methoxypropanol-2	203-539-1	107-98-2	375	100	568	150	Skin
1-Methylbutylacetate	210-946-8	626-38-0	270	50	540	100	-
2-Butoxyethanol	203-905-0	111-76-2	98	20	246	50	Skin
2-Methoxy-1-methylethylacetate	203-603-9	108-65-6	275	50	550	100	Skin
2-Phenylpropene	202-705-0	98-83-9	246	50	492	100	-
3-Pentylacetate		620-11-1	270	50	540	100	-
4-Methylpentan-2-one	203-550-1	108-10-1	83	20	208	50	-
5-Methylhexan-2-one	203-737-8	110-12-3	95	20	-	-	-
5-Methylheptan-3-one	208-793-7	541-85-5	53	10	107	20	-
Sodium azide	247-852-1	26628-22-8	0,1	-	0,3	-	Skin
Ethylamine	200-834-7	75-04-7	9,4	5	-	-	-
Ethylene glycol	203-473-3	107-21-1	52	20	104	40	Skin
Ethylbenzene	202-849-4	100-41-4	442	100	884	200	Skin
Acetone	200-662-2	67-64-1	1210	500	-	-	-
Acetonitrile	200-835-2	75-05-8	70	40	-	-	-
n-Butylacrylate	205-480-7	141-32-2	11	2	53	10	-
Allyl alcohol	203-470-7	107-18-6	4,8	2	12,1	5	Skin
Inorganic lead and its compounds	-	-	0,15	-	-	-	-
Ammonia, anhydrous	231-635-3	7664-41-7	14	20	36	50	-
Silver (soluble compounds as Ag) ⁽⁶⁾	-	-	0,01	-	-	-	-
Silver, metallic	231-131-3	7440-22-4	0,1	-	-	-	-
Barium (soluble compounds as Ba) ⁽³⁾	-	-	0,5	-	-	-	-
Butanone	201-159-0	78-93-3	600	200	900	300	-
Hydrogen bromide	233-113-0	10035-10-6	-	-	6,7	2	-
Bromine ⁽⁶⁾	231-778-1	7726-95-6	0,7	0,1	-	-	-
Diethylether	200-467-2	60-29-7	308	100	616	200	-
Diethylamine	203-716-3	109-89-7	30	10	-	-	-
Dimethylether	204-065-8	115-10-6	1920	1000	-	-	-
Dimethylamine	204-697-4	124-40-3	3,8	2	9,4	5	-
Carbon dioxide	204-696-9	124-38-9	9000	5000	-	-	-
Calcium dihydroxide	215-137-3	1305-62-0	5	-	-	-	-
e-Caprolactam (dust or vapour)	203-313-2	105-60-2	10	-	40	-	-
Heptan-2-one	203-767-1	110-43-0	238	50	475	100	Skin
Heptan-3-one	203-388-1	106-35-4	95	20	-	-	-

Tin (inorganic compounds as Sn) ⁽⁸⁾			2	-	-	-	-
Cumene	202-704-5	98-82-8	100	20	250	50	Skin
Cresols (all isomers)	215-293-2	1319-77-3	22	5	-	-	-
Cyanamide	206-992-3	420-04-2	2	-	-	-	-
Cyclohexanone	203-631-1	108-94-1	40,8	10	81,6	20	-
Platinum (metallic)	231-116-1	7440-06-4	1	-	-	-	-
Methanol	200-659-6	67-56-1	260	200	-	-	-
Mesitylene	203-604-4	108-67-8	100	20	-	-	-
m-Xylene	203-576-3	108-38-3	221	50	442	100	Skin
Nitric oxide	233-271-0	10102-43-9	30	25	-	-	-
Formic acid	200-579-1	64-18-6	9	5	-	-	-
N,N-Dimethylacetamide	204-826-4	127-19-5	36	10	72	20	Skin
Naphtalene	202-049-5	91-20-3	50	10	-	-	-
n-Heptane	205-563-8	142-82-5	2085	500	-	-	-
Nicotine ⁽⁸⁾	200-193-3	54-11-5	0,5	-	-	-	-
Nitrobenzene	202-716-0	98-95-3	5	1	-	-	-
Xylene, mixed isomers, pure	215-535-7	1330-20-7	221	50	442	100	Skin
Oxalic acid	205-634-3	144-62-7	1	-	-	-	-
2-Butoxyethyl acetate	203-933-3	112-07-2	133	20	333	50	Skin
Amylacetate, tert		625-16-1	270	50	540	100	-
Isopentylacetate	204-662-3	123-92-2	270	50	540	100	-
Acetic acid	200-580-7	64-19-7	25	10	-	-	-
Pentylacetate	211-047-3	628-63-7	270	50	540	100	-
o-Xylene	202-422-2	95-47-6	221	50	442	100	Skin
Orthophosphoric acid	231-633-2	7664-38-2	1	-	2	-	-
Phosphorus pentaoxide	215-236-1	1314-56-3	1	-	-	-	-
Phosphorus pentachloride	233-060-3	10026-13-8	1	-	-	-	-
Phosphorus pentasulphide	215-242-4	1314-80-3	1	-	-	-	-
Picric acid	201-865-9	88-89-1	0,1	-	-	-	-
Piperazine (dust or vapour)	203-808-3	110-85-0	0,1	-	0,3	-	-
p-Xylene	203-396-5	106-42-3	221	50	442	100	Skin
Propionic acid	201-176-3	79-09-4	31	10	62	20	-
Pyrethrum		8003-34-7	5	-	-	-	-
Pyridine	203-809-9	110-86-1	15	5	-	-	-
Resorcinol	203-585-2	108-46-3	45	10	-	-	-
Dihydrogen selenide	231-978-9	7783-07-5	0,07	0,02	0,17	0,05	-
Sulphotep	222-995-2	3689-24-5	0,1	-	-	-	Skin
Tetrahydrofuran	203-726-8	109-99-9	150	50	300	100	Skin
Triethylamine	204-469-4	121-44-8	8,4	2	12,6	3	Skin
Lithium hydride	231-484-3	7580-67-8	0,025	-	-	-	-
Hydrogen fluoride	231-634-8	7664-39-3	1,5	1,8	2,5	3	-
Hydrogen chloride	231-595-7	7647-01-0	8	5	15	10	-
Phenol	203-632-7	108-95-2	7,8	2	-	-	Skin
Fluorine	231-954-8	7782-41-4	1,58	1	3,16	2	-
Phosgene	200-870-3	75-44-5	0,08	0,02	0,4	0,1	-
Chlorobenzene	203-628-5	108-90-7	47	10	94	20	-
Chlorodifluoromethane	200-871-9	75-45-6	3 600	1 000	-	-	-
Chloroform	200-663-8	67-66-3	10	2	-	-	Skin

Notes:

(1) "EINECS No.": European Inventory of Existing Chemical Substances Number.

(2) "CAS No.": Chemical Abstract Service Registry Number.

(3) Measured or calculated in relation to a reference period of eight-hours time-weighted average.

(4) A limit value above which exposure should not occur and is related to a 15-minute period, unless otherwise specified.

(5) "mg/m³": milligrams per cubic metre of air at 20 °C and 101,3 kPa.

(6) "ppm": parts per million by volume in air (ml/m³).

(7) A skin notation assigned to the OEL identifies the possibility of significant uptake through the skin.

(8) The existing scientific knowledge on the consequences on health are particularly limited

SCHEDULE 2

(Regulations 2(1), 4(2), 5(3)(e) and 11)

**BIOLOGICAL LIMIT VALUES AND HEALTH SURVEILLANCE
MEASURES****Lead and its ionic compounds**

1. Biological monitoring shall include measuring the blood-lead level (PbB) using absorption spectrometry or a method giving equivalent results. The binding biological limit value is:-

70 μg Pb/100 ml blood

2. Health surveillance shall be carried out where:-

- (a) exposure to a concentration of lead-in-air is greater than 0,075 mg/m^3 , calculated as a time-weighted average over 40 hours per week; or
- (b) a blood-lead level greater than 40 μg Pb/100 ml blood is measured in individual employees.

3. The Chief Officer shall, by order to be published in the Gazette, issue practical guidelines for biological monitoring and health surveillance, which shall include recommendations of biological indicators (such as ALAU, ZPP and ALAD) and biological monitoring strategies.

SCHEDULE 3
(Regulation 14)

**PROHIBITIONS RELATING TO CERTAIN CHEMICAL
AGENTS AND ACTIVITIES**

Part A - Chemical Agents

Column 1	Column 2	Column 3	Column 4
Name of agent	EINECS No ⁽¹⁾	CAS No ⁽²⁾	Concentration limit for exemption
2-naphthylamine and its salts	202-080-4	91-59-8	0,1% w/w
4-aminodiphenyl and its salts	202-177-1	92-67-1	0,1% w/w
Benzidine and its salts	202-199-1	92-87-5	0,1% w/w
4-nitrodiphenyl	202-204-7	92-93-3	0,1% w/w
Notes:			
⁽¹⁾ "EINECS No.": European Inventory of Existing Chemical Substances Number.			
⁽²⁾ "CAS No.": Chemical Abstract Service Registry Number.			

Part B - Activities involving chemical agents

None.

SCHEDULE 4

(Regulation 2(1))

CATEGORIES OF DANGER OF HAZARDOUS CHEMICAL AGENTS

Column 1	Column 2
Category of danger	Property
Explosive	Solid, liquid, pasty or gelatinous substances and preparations which may give rise to an exothermic reaction without atmospheric oxygen thereby quickly evolving gases, and which under defined test conditions detonate, quickly deflagrate or upon heating explode when partially confined
Oxidising	Substances and preparations which give rise to a highly exothermic reaction in contact with other substances, particularly flammable substances
Extremely flammable	Liquid substances and preparations having an extremely low flash point and a low boiling point and gaseous substances and preparations which are flammable in contact with air at ambient temperature and pressure
Highly flammable	Any of the following substances and preparations, namely:- <ul style="list-style-type: none"> (a) substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any application of energy; (b) solid substances and preparations which may readily catch fire after brief contact with a source of ignition and which continue to burn or to be consumed after removal of the source of ignition; (c) liquid substances and preparations having a very low flash point, or (d) substances and preparations which, in contact with water or damp air, evolve highly flammable gases in dangerous quantities
Flammable	Liquid substances and preparations having a low flash point
Very toxic	Substances and preparations which in very low quantities, cause death or acute or chronic damage to health if they are inhaled, swallowed or absorbed via the skin
Toxic	Substances and preparations which in low quantities cause death or acute or chronic damage to health if they are inhaled, swallowed or absorbed via the skin
Harmful	Substances and preparations which may cause death or acute or chronic damage to health if they are inhaled, swallowed or absorbed via the skin
Corrosive	Substances and preparations which may, on contact with living tissues, destroy them
Irritant	Non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, may cause inflammation

Sensitising	Substances and preparations which, if they are inhaled or if they penetrate the skin, are capable of eliciting a reaction by hypersensitisation such that on further exposure to the substance or preparation, characteristic adverse effects are produced
Carcinogenic	Substances and preparations which, if they are inhaled or ingested or if they penetrate the skin may induce cancer or increase its incidence
Mutagenic	Substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce heritable genetic defects or increase their incidence
Toxic for reproduction	Substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may produce or increase the incidence of non-heritable adverse effects in the progeny or an impairment of male or female reproductive functions or capacity
Dangerous for the environment	Substances and preparations which, were they to enter into the environment, would present or might present an immediate or delayed danger for one or more components of the environment

Dated this 18th day of July 2002.

By the Administrator's Command,

D.J. BONNER,

Chief Officer,

(107/6)

Sovereign Base Areas.

No. 65**THE HEALTH AND SAFETY AT WORK ORDINANCE 1999
(Ordinance 6 of 1999)****REGULATIONS MADE UNDER SECTION 38.**

In exercise of the powers vested in him by section 38 of the Health and Safety at Work Ordinance 1999^(a) the Administrator hereby makes the following Regulations:-

PART I – GENERAL PROVISIONS**Citation**

1. These Regulations may be cited as the Health and Safety at Work (Carcinogenic and Mutagenic Agents) Regulations 2002.

Interpretation

2. - (1) In these Regulations, unless the context otherwise requires:-

“assessment” means an assessment made pursuant to regulation 4(1);

“carcinogenic agent” means:-

(a) any substance or preparation which may induce cancer or increase its incidence, if it is inhaled or ingested or if it penetrates the skin; or

(b) any substance, or preparation listed in Schedule 1 or arising from a process specified in Schedule 1;

“limit value” means the limit of the time-weighted average of the concentration of a ‘carcinogenic or mutagenic agent’ in the air within the breathing zone of an employee in relation to a specific reference period specified in Schedule 2;

“mutagenic agent” means any substance or preparation which may induce heritable genetic defects or increase their incidence if it is inhaled or ingested or if it penetrates the skin;

“the Ordinance” means the Health and Safety at Work Ordinance 1999.

(2) In these Regulations, unless the context otherwise requires, any reference to a numbered regulation or a numbered Schedule is a reference to the regulation or Schedule so numbered in these Regulations.

Application

3. - (1) Subject to paragraphs (2) and (3) below, these Regulations shall apply to and in relation to any work activity where any person is or is likely to be exposed to any carcinogenic or mutagenic agent, with a view to protecting such person against risks to his health arising out of any such exposure.

(2) These Regulations shall not apply to or in relation to any work activity where any person is or is likely to be exposed only to radiation which falls within the scope of application of the Treaty establishing the European Atomic Energy Community.

(a) Ordinance 6 of 1999.

(3) Where any provision of these Regulations applies to or in relation to asbestos and such provision conflicts with any provision of the Asbestos (Health and Safety of Persons at Work) Ordinance 2002^(b) or of the Asbestos (Health and Safety of Persons at Work) Regulations 2002, the provision which provides the greater level of protection to the person who is or is likely to be exposed to asbestos shall prevail.

(4) Where any duty is imposed by these Regulations on any employer in respect of his employees, he shall, so far as is reasonably practicable, be under a like duty in respect of any other person, whether at work or not, who may be affected by the work carried on by the employer, except that the duties of an employer:-

- (a) under regulations 14 (consultation and participation of employees) and 15 (health surveillance) shall not extend to persons who are not his employees; and
- (b) under regulations 12 (training of employees), 13 (other information for employees) and 16 (record-keeping) shall not extend to persons who are not his employees, unless those persons are on the premises where the work is being carried on.

(5) These Regulations shall apply to a self-employed person as they apply to an employer and an employee and as if that self-employed person were both an employer and an employee, except that regulations 13, 14, 15 and 16 shall not apply to a self-employed person.

PART II - EMPLOYERS' OBLIGATIONS

Assessment of risks to health

4. - (1) Every employer who carries out any work which is likely to expose any of his employees to any carcinogenic or mutagenic agent, shall make an assessment in accordance with paragraph (2) below.

(2) The assessment shall consist of a determination of the nature, degree and duration of exposure of employees to any carcinogenic or mutagenic agent, for the purposes of:-

- (a) assessing the risks created by that work to the health of those employees; and
- (b) laying down the measures that need to be taken,

and account shall be taken of all cases of major exposure to any other agent, such as an agent which has harmful effects on the skin.

(3) The assessment shall be recorded in writing and reviewed regularly and in any case where any change occurs in the conditions which may affect the exposure of employees to any carcinogenic or mutagenic agent.

(4) The employer shall provide the Chief Inspector, upon request, with the information used for making the assessment.

(5) When making the assessment the employer shall pay particular attention to any potential effects on the health of any employees who are at particular risk and shall, inter alia, take account of the desirability of not employing such persons in areas where they may come into contact with any carcinogenic or mutagenic agents.

^(b) Ordinance 2 of 2002.

Reduction and substitution

5. – (1) Every employer shall reduce the use of any carcinogenic or mutagenic agent in the work place, in particular by substituting such agent, so far as is technically practicable, with a substance, preparation or process, which, under its conditions of use, is harmless or is less dangerous to the health of his employees.

(2) The employer shall submit the findings of his investigations to the Chief Inspector, upon request.

Prevention or reduction of exposure

6. – (1) Where the results of the assessment reveal a risk to the health of any employee the exposure of such person to any carcinogenic or mutagenic agent shall be prevented, so far as is practicable.

(2) Where it is not technically practicable to substitute the carcinogenic or mutagenic agent pursuant to regulation 5(1), the employer shall ensure that the carcinogenic or mutagenic agent is produced and used, so far as is technically practicable, in a closed system.

(3) Where it is not technically practicable to produce and use the carcinogenic or mutagenic agent in a closed system, pursuant to paragraph (2) above, the employer shall ensure that the level of exposure of his employees to such agent is reduced to as low a level as is technically practicable.

(4) Exposure to a carcinogenic or mutagenic agent at work shall in no case exceed the limit value for such agent specified in Schedule 2.

(5) Wherever a carcinogenic or mutagenic agent is produced or used at work, the employer shall apply all of the following measures-

- (a) the limitation of the quantities of any carcinogenic or mutagenic agent in the work place;
- (b) keeping the number of employees exposed or likely to be exposed as low as possible;
- (c) the design of work processes and engineering control measures so as to avoid or minimise the release of any carcinogenic or mutagenic agent into the work place;
- (d) the evacuation of the carcinogenic or mutagenic agent at source, the use of a local extraction system and the use of general ventilation, all such methods to be appropriate and compatible with the need to protect public health and the environment;
- (e) the use of existing appropriate procedures for the measurement of the carcinogenic or mutagenic agent, in particular for the early detection of abnormal exposures resulting from an unforeseeable incident or an accident;
- (f) the application of appropriate working procedures and methods;
- (g) the use of collective protection measures and where exposure can not be prevented by other means, individual protection measures;

- (h) the use of hygiene measures, in particular, the regular cleaning of the floors, walls and other surfaces;
- (i) the provision of information to employees;
- (j) the demarcation of risk zones and use of adequate warning and safety signs, including 'smoking is prohibited' signs in areas where employees are exposed or are likely to be exposed to any carcinogenic or mutagenic agent;
- (k) the drawing up plans to deal with emergencies, which are likely to result in abnormally high exposure;
- (l) the use of appropriate means to ensure the safe storage, handling and transportation of any carcinogenic or mutagenic agent, in particular the use of containers, sealed and clearly labelled, in accordance with existing legislation;
- (m) the use of appropriate means to ensure the safe collection, storage and disposal of waste by employees, including the use of containers, sealed and clearly labelled, in accordance with existing legislation.

Information for Chief Inspector

7. Where the results of the assessment reveal a risk to the health of any employee, the employer shall make available to the Chief Inspector the appropriate information on:-

- (a) the activities and industrial processes carried out and the reasons why any carcinogenic or mutagenic agents are used;
- (b) the quantities of substances or preparations produced or used which contain any carcinogenic or mutagenic agent;
- (c) the number of employees exposed;
- (d) the preventive measures taken;
- (e) the type of protective equipment used;
- (f) the nature and degree of exposure;
- (g) the cases of substitution.

Unforeseen exposure

8. - (1) Where an unforeseeable incident or an accident occurs which is likely to result in an abnormal exposure of his employees, the employer shall inform them.

(2) Until the situation has been restored to normal and the causes of the abnormal exposure have been eliminated:-

- (a) only those employees who are essential to the carrying out of repairs and other necessary work shall be permitted to work in the affected area;
- (b) such employees shall be provided with protective clothing and individual respiratory protection equipment which they must wear;
- (c) the exposure of such employees must not be continuous and shall be kept to the minimum of time necessary for each such employee;

- (d) unprotected employees shall not be allowed to work in the affected area.

Foreseeable exposure

9. – (1) For certain activities, such as maintenance, in respect of which it is foreseeable that there is the potential for a significant increase in exposure of any employee and where all possibilities for the taking of technical preventive measures to reduce such exposure have been exhausted, the employer shall comply with paragraphs (2) to (4) below.

(2) The employer shall determine the measures necessary to:-

- (a) reduce the duration of exposure of his employees to the minimum; and
- (b) ensure their protection whilst they are engaged in such activities.

(3) The employer shall take the appropriate measures to ensure that:-

- (a) the employees concerned are provided with protective clothing and individual respiratory protection equipment, which they must wear as long as the abnormal exposure persists; and
- (b) their exposure is not continuous and is kept to the minimum time necessary for each such employee.

(4) The employer shall take the appropriate measures to ensure that:-

- (a) the zones where the activities referred to in paragraph (1) above are carried out are clearly demarcated and indicated; or
- (b) unauthorised persons are prevented from gaining access thereto.

Access to risk zones

10. Where activities are carried out at work in relation to which the results of the assessment reveal a risk to the health of his employees, the employer shall take the appropriate measures to ensure that access to the zones in which those activities are carried out are accessible solely to those employees who, by reason of their work or duties, are required to enter them.

Hygiene and individual protection measures

11. – (1) Where any activity at work involves a risk of contamination by any carcinogenic or mutagenic agent, the employer shall take the appropriate measures to ensure that:-

- (a) employees do not eat, drink or smoke in those zones where such activity is carried out;
- (b) employees are provided with appropriate protective clothing or other appropriate special clothing and separate storage places are provided for the working or protective clothing and for street clothing;
- (c) employees are provided with appropriate and adequate washing and toilet facilities;

- (d) the protective equipment is properly placed in a well-defined place, is checked and cleaned if possible before, and in any case after, each use and any defective protective equipment is repaired or replaced before further use.

(2) No employee shall be required to pay for or contribute to the cost of any of the measures referred to in paragraph (1) above.

Training of employees

12. – (1) Every employer shall take appropriate measures to ensure that his employees or their representatives in the undertaking or establishment receive appropriate and adequate training, on the basis of all available information, in particular in the form of information and written instructions concerning:–

- (a) the potential risks to health, including the additional risks to health created by smoking tobacco;
- (b) the precautions to be taken to prevent exposure;
- (c) the hygiene requirements;
- (d) the wearing and use of protective equipment and clothing;
- (e) the measures to be taken by employees, and any specialised personnel whose services may be called upon:–
 - (i) in the event of an incident or accident and
 - (ii) to prevent any such incident or accident.

(2) The training required by paragraph (1) above shall be:–

- (a) adapted to take account of:–
 - (i) any changes in the risks to health; and
 - (ii) any new risks to health; and
- (b) repeated at regular intervals.

(3) Every employer shall take the necessary measures to ensure that:–

- (a) his employees know which, if any, containers, packages and installations at the work place contain carcinogenic or mutagenic agents; and
- (b) all such containers, packages and installations are clearly and appropriately labelled, marked or indicated.

Other information for employees

13. – (1) Every employer shall take the appropriate measures to ensure that:–

- (a) his employees or their representatives in the undertaking or establishment can check that these Regulations have been applied or can be involved in their application, in particular with regard to:–
 - (i) the consequences for their health and safety of the selection, wearing and use of protective clothing and equipment, without prejudice to the employer's responsibility for determining the effectiveness of the protective clothing and equipment; and

- (ii) the measures taken or to be taken pursuant to regulation 9(2), without prejudice to the employer's responsibility for determining such measures;
- (b) his employees or their representatives in the undertaking or establishment are informed, without delay, of:-
 - (i) any abnormal exposure, including any foreseeable exposure;
 - (ii) the causes thereof; and
 - (iii) the measures taken or to be taken to remedy the situation.

(2) Every employer shall keep an up-to-date list of employees engaged in the activities in relation to which the results of the assessment reveal a risk to the health of employees, indicating, where the relevant information is available, the exposure to which they have been subjected.

(3) The following persons shall have access to the list referred to in paragraph (2) above:-

- (a) the Chief Inspector and his Inspectors;
- (b) the medical practitioner responsible for the health surveillance of the employees on the list;
- (c) any other person responsible for health and safety at the workplace.

(4) Each employee shall have access to the information on the list which concerns him personally.

(5) Employees or their representatives in the undertaking or establishment shall have access to anonymous collective information drawn from the list.

Consultation and participation of employees

14. Every employer shall consult and permit the participation of his employees or their representatives or both on the matters covered by these Regulations.

Health surveillance

15. - (1) Where the results of the assessment reveal a risk to the health of his employees the employer shall make the necessary arrangements to ensure that such employees are placed under appropriate health surveillance.

(2) The arrangements referred to in paragraph (1) above shall be such that each employee shall be able to undergo, where appropriate, appropriate health surveillance:-

- (a) prior to exposure; and
- (b) at regular intervals thereafter.

(3) The arrangements referred to in paragraph (1) above shall be such that it is possible to implement directly individual and occupational medical measures.

(4) Where any employee is found to be suffering an abnormality which is suspected to be the result of exposure to any carcinogenic or mutagenic agent, the medical practitioner responsible for the

health surveillance of the employee may require other employees who have been similarly exposed to undergo health surveillance.

(5) Where paragraph (4) above applies the employer shall make another assessment, in accordance with regulation 4.

(6) Where health surveillance is carried out, an individual medical record shall be kept for each employee and the medical practitioner responsible for the health surveillance of the employees shall recommend any protective or preventive measure to be taken in respect of any individual employee.

(7) Each employee shall be entitled to receive a copy of his individual medical record.

(8) The employer shall ensure that information and advice is provided to employees regarding any health surveillance which they may undergo following the end of exposure.

(9) (a) Each employee shall have access to the results of the health surveillance which concerns him personally; and

(b) the employees or the employer may request a review of the results of the health surveillance.

(10) The employer shall ensure that the health surveillance of his employees is carried out in accordance with the practical recommendations for the health surveillance of employees provided in Schedule 3.

(11) Any case of cancer of an employee which is identified as resulting from exposure to any carcinogenic or mutagenic agent at work shall be notified to the Chief Inspector.

Record-keeping

16. – (1) The list referred to in regulation 13(2) and the individual medical record referred to in regulation 15(6) shall be kept for at least forty years following the end of exposure.

(2) These records shall be forwarded to the Chief Inspector in any case where the employer's undertaking ceases activity.

PART III – MISCELLANEOUS PROVISIONS

Commencement

17. These Regulations shall come into force on the date of their publication in the Gazette, apart from:-

(a) regulations 4(1), 4(3), 4(5), 5(1), 6(2), 6(5), 7, 11(1), 12(3) and 15(4), in so far as they relate to mutagenic agents;

(b) paragraph 5 of Schedule 1; and

(c) the limit values for benzene and hardwood dust, specified in Schedule 2,

which shall come into force on the 1st January 2003.

SCHEDULE 1

(Regulations 2(1) and 17)

LIST OF SUBSTANCES, PREPARATIONS AND PROCESSES

1. Manufacture of auramine.
2. Work involving exposure to aromatic polycyclic hydrocarbons present in coal soots, tar, pitch, fumes or dust.
3. Work involving exposure to dust, fumes or sprays produced during the roasting and electro-refining of cupro-nickel mattes.
4. Strong acid process used in the manufacture of isopropyl alcohol.
5. Work involving exposure to hardwood dusts.

SCHEDULE 2

(Regulations 2(1) and 6(4) and 17)

OCCUPATIONAL EXPOSURE LIMIT VALUES

Name of agent	EINECS ⁽¹⁾	CAS No ⁽²⁾	Limit values		Affected organs	
			mg/m ³⁽³⁾	ppm ⁽⁴⁾		
Benzene	200-753-7	71-43-2	3,25 ⁽⁵⁾	1 ⁽⁵⁾	Skin ⁽⁶⁾	Limit value: 3 ppm (=9,75 mg/m ³) (1 st January 2003)
Vinyl chloride monomer (VCM)	200-831	75-01-4	7,77 ⁽⁵⁾	3 ⁽⁵⁾	----	----
Hardwood dust	----	----	5.00 ⁽⁵⁾⁽⁷⁾	----	----	----

(1) EINECS: European inventory of existing chemical substances.

(2) CAS No: Chemical Abstract Service registry number.

(3) mg/m³: milligrams per cubic metre of air at 20 °C and 101,3 KPa. (pressure of 760 mm mercury)

(4) ppm: parts per million by volume in air (ml/m³).

(5) Measured or calculated in relation to a reference period of eight-hours.

(6) A skin exposure identifies the possibility of significant uptake through the skin.

(7) Inhalable fraction: if hardwood dusts have been mixed with other wood dusts, the limit value shall correspond to all wood dusts contained in this mixture.

SCHEDULE 3
(Regulation 15(10))

**PRACTICAL RECOMMENDATIONS FOR THE HEALTH
SURVEILLANCE OF EMPLOYEES**

1. Any medical practitioner responsible for the health surveillance of employees exposed to any carcinogenic or mutagenic agent must be familiar with the exposure conditions or circumstances of each employee.
2. The health surveillance of employees must be carried out in accordance with the principles and practices of occupational medicine and must include the following measures:-
 - (a) keeping an individual record of each employee's medical and occupational history;
 - (b) a personal interview with the employee;
 - (c) where appropriate, biological surveillance and detection of early and reversible effects on the health of the employee.
3. Further tests may be decided upon for each employee who is subject to health surveillance, in the light of the most recent knowledge available to occupational medicine.

Dated this 18th day of July 2002.

By the Administrator's Command,
D.J. BONNER,
Chief Officer,

(107/6)

Sovereign Base Areas.

No. 66

THE HEALTH AND SAFETY AT WORK ORDINANCE 1999
(Ordinance 6 of 1999)

REGULATIONS MADE UNDER SECTION 38.

In exercise of the powers vested in him by section 38 of the Health and Safety at Work Ordinance 1999^(a) and of all other powers enabling him in that behalf, the Administrator hereby makes the following Regulations:-

**PART I – GENERAL PROVISIONS AND
 INTERPRETATION**

Citation

1. These Regulations may be cited as the Health and Safety at Work (Biological Agents) Regulations 2002.

Interpretation

2. – (1) In these Regulations, unless the context otherwise requires:-

“biological agent” means any micro-organism, including any which has been genetically modified, cell culture or human endoparasite, which may be able to provoke any infection, allergy or toxicity;

“cell culture” means the in-vitro growth of cells derived from multicellular organisms;

“micro-organism” means a microbiological entity, cellular or non-cellular, capable of replication or of transferring genetic material;

“the Ordinance” means the Health and Safety at Work Ordinance 1999;

“risk assessment” shall be construed in accordance with regulation 5(1).

(2) In these Regulations, unless the context otherwise requires:-

(a) any reference to a numbered regulation or a numbered Schedule shall be a reference to the regulation or Schedule so numbered in these Regulations;

(b) any reference to a numbered paragraph shall be a reference to the paragraph so numbered in the regulation or Schedule in which it appears.

Classification of biological agents

3. – (1) Biological agents are classified into four risk groups, according to their level of risk of infection:-

(a) ‘Group 1 biological agent’ means one that is unlikely to cause human disease;

(b) ‘Group 2 biological agent’ means one that can cause human disease and may be a hazard to employees or other persons

^(a) Ordinance 6 of 1999.

at the workplace but is unlikely to spread to the community and for which there is usually effective prophylaxis or treatment available;

- (c) 'Group 3 biological agent' means one that can cause severe human disease and presents a serious hazard to employees and other persons at the workplace and may present a risk of spreading to the community but for which there is usually effective prophylaxis or treatment available;
- (d) 'Group 4 biological agent' means one that causes severe human disease and is a serious hazard to employees and other persons at the workplace and may present a high risk of spreading to the community and for which there is usually no effective prophylaxis or treatment available.

(2) Every biological agent which is classified as a Group 2, Group 3 or Group 4 biological agent is listed in the Classification of Biological Agents in Schedule 1, which list may be amended from time to time by the Chief Officer by order to be published in the Gazette.

(3) Where any biological agent does not appear in the list in the Classification of Biological Agents in Schedule 1, the employer shall provisionally classify that agent into one of the four risk groups, according to its level of risk of infection and, if in doubt as to which of two alternative groups is the most appropriate, he shall classify such agent into the higher of the two.

Application

4. - (1) These Regulations shall apply to and in relation to any work activity involving any biological agent, with a view to protecting employees against risks to their health arising, or likely to arise, from exposure to any such agent.

(2) These Regulations shall apply without prejudice to any legislation concerning the contained use of any genetically modified micro-organisms and the deliberate release into the environment of genetically modified organisms.

(3) Where any duty is placed by these Regulations on any employer in respect of his employees he shall, so far as is reasonably practicable be under a like duty in respect of any other person, whether at work or not, who may be affected by the work carried on by the employer, except that the duties of an employer:-

- (a) under regulations 13 (list of exposed employees), 14 (consultation and participation of employees) and 16 (health surveillance) shall not extend to persons who are not his employees; and
- (b) under regulations 11 (information and training for employees) and 12 (information for employees in particular cases) shall not extend to persons who are not his employees unless those persons are on the premises where the work is being carried on.

(4) These Regulations shall apply to a self-employed person as they apply to an employer and an employee and as if such self-employed person were both an employer and an employee, except that regulations 14 and 16 shall not apply to a self-employed person.

PART II - EMPLOYERS' OBLIGATIONS

Assessment of risks to health

5. – (1) Where any employer carries on any activity likely to involve a risk of exposure to any biological agent, he shall determine the nature, degree and duration of such exposure in order to assess any risk to the health of his employees and to determine which measures must be taken to protect them.

(2) In the case of any work activity involving exposure to biological agents which have been classified into two or more of the four risk groups the risk to the health of employees shall be assessed on the basis of the danger presented by all hazardous biological agents present.

(3) The risk assessment shall be:-

- (a) renewed regularly; and
- (b) in any event, where any change occurs in the conditions which may affect the exposure of any employee to any biological agent.

(4) The employer shall provide any inspector, on his request, with the information used for making the assessment.

(5) The risk assessment shall be made on the basis of all available information, including:-

- (a) the Classification of Biological Agents in Schedule 1 or, where the biological agent does not appear in the said Schedule, the provisional classification given to such agent by the employer, pursuant to regulation 3(3);
- (b) any recommendations by the Chief Inspector or any inspector which indicate that a particular biological agent should be controlled in order to protect the health of employees, where they are or may be exposed to such agent;
- (c) any information on any disease which may be contracted as a result of the work of the employees;
- (d) any potential allergenic or toxigenic effects resulting from the work of the employees;
- (e) any knowledge of a disease from which an employee is found to be suffering and which has a direct connection with his work.

Application of specific regulations in relation to risk assessment

6. – (1) Where the risk assessment shows that the exposure or potential exposure is to a Group 1 biological agent, with no identifiable risk to the health of employees, regulations 7 to 18 shall not apply but employers and employees shall observe the principles of good occupational hygiene and safety.

(2) Where the risk assessment shows that the activity does not involve a deliberate intention to work with or use a biological agent but may result in any employee being exposed to a biological agent, as in the course of the activities listed in Schedule 3, regulations 7, 9, 10 and 12 to 16 shall apply, unless the risk assessment shows their application to be unnecessary.

Substitution

7. Where the nature of the activity so permits, every employer shall avoid the use of any harmful biological agent by substituting it with a biological agent which, under its conditions of use and according to the present state of knowledge, is not dangerous or is less dangerous to the health of employees.

Reduction of risks

8. – (1) Where the risk assessment shows there is a risk to the health of any employee arising or likely to arise from exposure to any biological agent, such exposure shall be prevented, where technically practicable.

(2) Where it is not technically practicable to prevent exposure to any biological agent pursuant to paragraph (1), having regard to the activity and the risk assessment, the risk of exposure shall be reduced to as low a level as is necessary in order to protect adequately the health of the employees concerned, in particular by taking the following measures -

- (a) keeping as low as possible the number of employees exposed or likely to be exposed;
- (b) designing work processes and engineering control measures so as to avoid or minimise the release of any biological agent into the workplace;
- (c) providing collective protection measures or, where exposure cannot be avoided by other means, individual protection measures;
- (d) instituting hygiene measures compatible with the aim of the prevention or reduction of the accidental transfer or release of any biological agent from the workplace;
- (e) displaying the biohazard sign depicted in Schedule 4 and other relevant warning signs;
- (f) drawing up plans to deal with any accidents involving biological agents;
- (g) testing, where it is necessary and technically practicable, for the presence, outside the primary physical confinement, of biological agents used at work;
- (h) specifying the means for the safe collection, storage and disposal of wastes by employees, after suitable treatment where appropriate, which shall include the use of secure and identifiable containers;
- (i) making arrangements for the safe handling and transport of any biological agents within the workplace.

Information for the Chief Inspector

9. – (1) Where the risk assessment shows there is a risk to the health of any employee, the employer shall, when requested, make available to the Chief Inspector or any Inspector appropriate information on:-

- (a) the results of such assessment;
- (b) the activities in which any employee has been exposed or may have been exposed to any biological agent;

- (c) the number of employees exposed;
- (d) the full name and capabilities of the person responsible for health and safety at the workplace;
- (e) the protection and prevention measures taken, including working procedures and methods;
- (f) an emergency plan for the protection of employees from any exposure to any Group 3 or Group 4 biological agent, which might result from a loss of physical containment.

(2) Every employer shall inform forthwith the Chief Inspector or any Inspector of any accident which may have resulted in the release of any biological agent which might cause severe human infection or illness.

(3) Where the employer's undertaking ceases activity, the list of exposed employees required by regulation 12 and the medical records required by regulation 15 shall be sent forthwith to the Chief Inspector or any Inspector.

Hygiene and individual protection measures

10. – (1) Where any work activity involving any biological agent creates a risk to the health of any employee, the employer shall take appropriate measures to ensure that:–

- (a) employees do not eat or drink in working areas where there is a risk of contamination by any biological agent;
- (b) employees are provided with appropriate protective clothing or other appropriate special clothing;
- (c) employees are provided with appropriate and adequate washing and toilet facilities, which may include eye washes and skin antiseptics;
- (d) any necessary protective equipment is:–
 - (i) properly stored in a well-defined place;
 - (ii) checked and cleaned, if possible before, and in any case after, each use;
 - (iii) repaired, where defective, or is replaced before further use;
- (e) procedures are specified for taking, handling and processing samples of human or animal origin.

(2) The employer shall ensure that:–

- (a) working clothes and protective equipment, including the protective clothing referred to in paragraph (1), which may be contaminated by any biological agent is removed on leaving the working area and, prior to taking the measures referred to in subparagraph (b) below, kept separately from other clothing;
- (b) such clothing and protective equipment is decontaminated and cleaned or, if necessary, destroyed.

(3) Employees may not be charged for the cost of the measures referred to in paragraphs (1) and (2).

Information and training for employees

11. – (1) Appropriate measures shall be taken by the employer to ensure that employees or their representatives in the undertaking or establishment receive sufficient and appropriate training, on the basis of all available information, in particular in the form of information and instructions, concerning:-

- (a) any potential risks to health;
 - (b) any precautions to be taken to prevent exposure;
 - (c) any hygiene requirements;
 - (d) any use of protective equipment and clothing; and
 - (e) any measures to be taken by employees in the case of accidents and to prevent accidents;
- (2) The training required by paragraph (1) shall be:-
- (a) given at the beginning of work involving contact with biological agents;
 - (b) adapted to take account of new or changed risks; and
 - (c) repeated periodically, where necessary.

Information for employees in particular cases

12. – (1) Every employer shall provide written instructions at the workplace and, where necessary, display notices which shall include, as a minimum, the procedure to be followed in the case of:-

- (a) a serious accident or incident involving the handling of a biological agent;
- (b) handling a Group 4 biological agent.

(2) An employee shall report immediately any accident or incident involving the handling of a biological agent to the person in charge or to the person responsible for health and safety at work.

(3) The employer shall inform forthwith the employees or their representatives of any accident or incident which may have resulted in the release of any biological agent and which could cause severe human infection or illness.

(4) The employer shall inform the employees or their representatives in the undertaking or establishment, as soon as possible, when a serious accident or incident occurs, of the causes thereof and on the measures taken or to be taken to rectify the situation.

(5) Each employee shall have access to the information on the list referred to in regulation 12 which relates to him personally.

(6) Employees or their representatives in the undertaking or establishment shall have access to anonymous collective information.

(7) The employer shall provide employees or their representatives, at their request, with the information made available to the Chief Inspector or any inspector, pursuant to regulation 9(1).

List of exposed employees

13. – (1) Every employer shall keep a list of employees exposed to any Group 3 or Group 4 biological agent.

(2) The list referred to in paragraph (1) shall indicate:–

- (a) the type of work carried out;
- (b) wherever possible, the biological agent to which the employees have been exposed; and
- (c) the records of exposures, accidents and incidents, as appropriate.

(3) The list required by paragraph (1) shall be kept for at least 10 years following the end of exposure, except that it shall be kept for 40 years following the last known exposure where the exposures:–

- (a) are due to biological agents known to be capable of establishing persistent or latent infections; or
- (b) may result in infections that
 - (i) in the light of present knowledge, are undiagnosable until illness develops many years later;
 - (ii) have particularly long incubation periods before illness develops;
 - (iii) result in illnesses which recrudescence at times over a long period, despite treatment; or
 - (iv) may have serious long-term sequelae.

(4) The medical practitioner referred to in regulation 15, any inspector and any other person responsible for health and safety at work shall have access to the list referred to in paragraph (1).

Consultation and participation of employees

14. Subject to the provisions of the Ordinance in relation to the consultation and information, every employer shall consult his employees or their representatives and facilitate their participation, in relation to the matters concerning the application of these Regulations.

Notification to the Chief Inspector

15. – (1) Every employer shall notify the Chief Inspector of the use for the first time of any:–

- (a) Group 2 biological agent;
- (b) Group 3 biological agent;
- (c) Group 4 biological agent,

at least 30 days before the commencement of the work.

(2) Subject to paragraph (3), prior notification shall also be made of the use for the first time of:–

- (a) each subsequent Group 4 biological agent; and
- (b) any subsequent new Group 3 biological agent provisionally classified by the employer as a Group 3 biological agent.

(3) Laboratories providing diagnostic services in relation to Group 4 biological agents shall be required to make only an initial notification of their intention.

(4) Renotification shall be made where there are substantial changes of importance to health and safety at work to processes or procedures which render the notification out of date.

(5) All notifications required by this regulation shall include:-

- (a) the name and address of the undertaking or establishment;
- (b) the full name and capabilities of the person responsible for health and safety at work;
- (c) the results of the risk assessment;
- (d) the species of the biological agent; and
- (e) the protection and prevention measures envisaged.

Health surveillance

16. - (1) Where the risk assessment shows there is a risk to the health of any employee, the employer shall make the necessary arrangements to ensure that such employee is subject to appropriate health surveillance.

(2) The arrangements referred to in paragraph (1) shall be such that:-

- (a) each employee shall be able to undergo health surveillance prior to exposure and at regular intervals thereafter; and
- (b) it is possible to implement directly individual and occupational hygiene measures.

(3) The risk assessment shall identify those employees for whom special protection measures may be required.

(4) When necessary, the employer shall make available effective vaccines for those employees who have not been immunised against the biological agent to which they are or are likely to be exposed; and when he makes any such vaccine available he shall have regard to the Code of Practice on Vaccination set out in Schedule 5.

(5) Where any employee is found to be suffering from any infection or illness which is suspected to be the result of exposure to a biological agent:-

- (a) the medical practitioner responsible for the health surveillance of the employees shall offer such surveillance to any other employees who have been similarly exposed; and
- (b) in that event, the employer shall carry out a further risk assessment.

(6) Where health surveillance is carried out, the employer shall ensure that an individual medical record is kept for each employee for a period of at least 10 years following the end of exposure, except that such record shall be kept for at least 40 years following the last known exposure in the particular cases referred to in subparagraphs (a) and (b) of regulation 13(3).

(7) The medical practitioner responsible for health surveillance shall propose any protection or prevention measures to be taken in respect of any employee.

(8) The employer shall ensure that his employees are provided with information and advice regarding any health surveillance which they may undergo following the end of exposure.

(9) (a) Each employee shall have access to the results of the health surveillance which relates to him personally; and

(b) the employer or the employees concerned may request a review of the results of the health surveillance.

(10) Employers and medical practitioners shall have regard to the Practical Recommendations for the Health Surveillance of Employees set out in Schedule 6.

(11) Every case of disease or death identified in accordance with the relevant medical practices as resulting from occupational exposure to any biological agent shall be notified forthwith to the Chief Inspector.

Health and veterinary care facilities

17. – (1) In health and veterinary care facilities other than diagnostic laboratories, the employer shall pay particular attention when carrying out the risk assessment to:-

(a) any uncertainty about the presence of any biological agent in any human patient or animal and any material or specimen taken from them;

(b) the hazards represented by any biological agents known or suspected to be present in any human patient or animal and any material or specimen taken from them; and

(c) the risks posed by the nature of the work.

(2) In the facilities referred to in paragraph (1), the employer shall take the appropriate measures to protect the health of the employees concerned, which measures shall include, in particular:-

(a) specifying appropriate decontamination and cleaning procedures; and

(b) implementing procedures enabling contaminated waste to be handled and disposed of without risk to health.

(3) In isolation facilities where there are any human patients or animals who are, or who are suspected of being, infected with any Group 3 or Group 4 biological agent, the employer shall select the most appropriate combination of containment measures from those listed in column A of the table in Schedule 7, in order to minimise the risk of infection.

Special measures for industrial processes, laboratories and animal rooms

18. – (1) Every employer who is engaged in any of the activities specified in paragraph (2) shall apply the appropriate containment measures in accordance with paragraph (3) or paragraph (4), as the case may be, in order to minimise the risk of infection, taking into account:-

- (a) the nature of the activities;
- (b) the results of the risk assessment; and
- (c) the nature of the biological agent concerned.

(2) The activities referred to in paragraph (1) are:-

- (a) research, development, teaching or diagnostic work in laboratories, which involves the handling of any Group 2, Group 3 or Group 4 biological agent;
- (b) keeping or handling of -laboratory animals which:-
 - (i) have been deliberately infected with any Group 2, Group 3, or Group 4 biological agent; or
 - (ii) are or are suspected to be naturally infected with any such agent;
- (c) industrial processes which involve the use of any Group 2, Group 3 or Group 4 biological agent.

(3) Every employer who is engaged in any of the activities referred to in paragraph (2)(a) or paragraph (2)(b) shall:-

- (a) subject to paragraph (5)(a), determine which of the containment levels specified in Column B of the table in Schedule 7 is most appropriate for the biological agent;
- (b) thereafter, select the appropriate containment measures from the list in Column A of the said table; and
- (c) thereafter, apply such measures.

(4) Every employer who is engaged in any of the activities referred to in paragraph (2)(c) shall:-

- (a) subject to paragraphs (5)(b) and (6), select containment measures from the list in Column A of the table in Schedule 2, which, where appropriate, may be drawn from one or more of the containment levels specified in Column B of the said table, on the basis of the risk assessment related to the particular industrial process or part of such process; and
- (b) thereafter, apply such measures.

(5) (a) For the purposes of paragraph (3)(a), the minimum containment level shall be:-

- (i) containment level 2, for laboratory activities involving the handling of a Group 2 biological agent;
- (ii) containment level 3, for laboratory activities involving the handling of a Group 3 biological agent;
- (iii) containment level 4, for laboratory activities involving the handling of a Group 4 biological agent;
- (iv) containment level 2, for laboratories which do not intentionally work with biological agents but handle materials in respect of which there exists uncertainty about the presence of any biological agent which may cause human disease;

(v) containment level 3 or containment level 4, as appropriate, for laboratories which do not intentionally work with biological agents but handle materials in respect of which the employer knows or suspects that such a containment level is necessary, except where guidelines issued by the Chief Inspector indicate that, in the particular case, a lower containment level is appropriate;

(b) for the purposes of paragraphs (3)(a) and (4)(a), containment level 3, for activities where it has not been possible to carry out a conclusive assessment of a biological agent but concerning which it appears that the use envisaged might involve a serious risk to the health of employees.

(6) Having regard to the assessment of the risk linked to the use of Group 2, Group 3 or Group 4 biological agents, as the case may be, the Chief Inspector may decide which measures must be taken by employers engaged in any of the activities referred to in paragraph (2)(c) and issue a notice to that effect.

SCHEDULE 1

(Regulations 3(2) and (3) and 5(5)(a))

**CLASSIFICATION OF BIOLOGICAL AGENTS
INTRODUCTORY NOTE**

1. – (1) In line with the scope of these Regulations, only agents which are known to infect humans are included in the classified list.

(2) Where appropriate, indicators are given of the toxic and allergic potential of these agents.

(3) Animal and plant pathogens which are known not to affect man are excluded.

(4) In drawing up this list of classified biological agents consideration has not been given to genetically modified micro-organisms.

2. – (1) The list of classified agents is based on the effect of those agents on healthy employees.

(2) No specific account is taken of any particular effects of such agents on those whose susceptibility to infections may be affected for one or more reasons, such as pre-existing disease, medication, compromised immunity, pregnancy or breast feeding.

(3) Additional risk to such employees shall be considered as part of the risk assessment.

(4) In certain industrial processes, certain laboratory work or certain work with animals involving actual or potential exposure of any employee to any Group 3 or Group 4 biological agent, any technical precautions taken shall comply with regulation 18 of these Regulations.

3. – (1) Biological agents which have not been classified for inclusion in Groups 2 to 4 of the list shall not be implicitly classified in Group 1.

(2) For agents where more than one species is known to be pathogenic to humans, the list shall include those species which are known to be the most frequently responsible for diseases, together with a more general reference to the fact that other species of the same genus may affect health.

(3) When a whole genus is mentioned in the classified list of biological agents, it is implicit that the species and strains known to be non-pathogenic are excluded.

4. – (1) Where a strain is attenuated or has lost known virulence genes, the containment required by the classification of its parent strain need not necessarily apply, subject to appropriate assessment of the potential risk in the workplace.

(2) This is the case, for example, where such a strain is to be used as a product or part of a product for prophylactic or therapeutic purposes.

5. The nomenclature of classified agents used to establish this list reflects and is in conformity with the latest international agreements of the taxonomy and nomenclature of agents at the time the list was prepared.

6. – (1) The list of classified biological agents reflects the state of knowledge at the time that it was prepared.

(2) It will be updated when it no longer reflects the latest state of knowledge.

7. All viruses which have already been isolated in humans and which do not appear in the list shall be deemed to be Group 2 biological agents, as a minimum, unless the Chief Inspector is persuaded on the basis of evidence that they are unlikely to cause any disease in humans.

8. – (1) Certain biological agents classified into Group 3, which are indicated in the list by two asterisks (**), may present a limited risk of infection for employees because they are not normally infectious by the airborne route.

(2) The Chief Inspector shall assess the containment measures to be applied to such agents, by taking account of the nature of the specific activities in question and of the quantity of the agent involved, with a view to determining whether, in particular circumstances, some of these measures may be dispensed with.

9. The requirements as to containment consequent on the classification of parasites apply only to stages in the life cycle of the parasite in which it is liable to be infectious to humans at the workplace.

10. – (1) This list gives a separate indication in cases where the biological agents are likely to cause allergic or toxic reactions, where an effective vaccine is available, or where it is advisable to keep a list of exposed employees for more than 10 years.

(2) The indications referred to in sub-paragraph (1) above are shown by the following letters:-

A: Possible allergic effects

D: List of employees exposed to this biological agent to be kept for more than 10 years after the end of the last known exposure of such persons.

T: Toxin production

V: Effective vaccine available

(3) The application of preventive vaccination shall take account of the Code of Practice on Vaccination in Schedule 5.

BACTERIA
and similar micro-organisms

Biological agent	Classification	Notes
<i>Actinobacillus actinomycetemcomitans</i>	2	
<i>Actinomadura madurae</i>	2	
<i>Actinomadura pelletieri</i>	2	
<i>Actinomyces gerencseriae</i>	2	
<i>Actinomyces israelii</i>	2	
<i>Actinomyces pyogenes</i>	2	
<i>Actinomyces spp</i> ¹	2	
<i>Arcanobacterium haemolyticum</i> (<i>Corynebacterium haemolyticum</i>)	2	
<i>Bacillus anthracis</i>	3	
<i>Bacteroides fragilis</i>	2	
<i>Bartonella bacilliformis</i>	2	
<i>Bartonella quintana</i> (<i>Rochalimaea quintana</i>)	2	
<i>Bartonella</i> (<i>Rochalinea</i>) <i>spp</i>	2	
<i>Bordetella bronchiseptica</i>	2	
<i>Bordetella parapertussis</i>	2	
<i>Bordetella pertussis</i>	2	v
<i>Borrelia burgdorferi</i>	2	
<i>Borrelia duttonii</i>	2	
<i>Borrelia recurrentis</i>	2	
<i>Borrelia spp</i>	2	
<i>Brucella abortus</i>	3	
<i>Brucella canis</i>	3	
<i>Brucella melitensis</i>	3	
<i>Brucella suis</i>	3	
<i>Burkholderia mallei</i> (<i>Pseudomonas mallei</i>)	3	
<i>Burkholderia pseudomallei</i> (<i>Pseudomonas pseudomallei</i>)	3	
<i>Campylobacter fetus</i>	2	
<i>Campylobacter jejuni</i>	2	
<i>Campylobacter spp</i>	2	
<i>Cardiobacterium hominis</i>	2	
<i>Chlamydia pneumoniae</i>	2	
<i>Chlamydia trachomatis</i>	2	
<i>Chlamydia psittaci</i> (avian strains)	3	
<i>Chlamydia psittaci</i> (other strains)	2	
<i>Clostridium botulinum</i>	2	T
<i>Clostridium perfringens</i>	2	
<i>Clostridium tetani</i>	2	T,V
<i>Clostridium spp</i>	2	

<i>Corynebacterium diphtheriae</i>	2	T,V
<i>Corynebacterium minutissimum</i>	2	
<i>Corynebacterium pseudotuberculosis</i>	2	
<i>Corynebacterium spp</i>	2	
<i>Coxiella burnetii</i>	3	
<i>Edwardsiella tarda</i>	2	
<i>Ehrlichia sennetsu</i> (<i>Rickettsia sennetsu</i>)	2	
<i>Ehrlichia spp</i>	2	
<i>Eikenella corrodens</i>	2	
<i>Enterobacter aerogenes/cloacae</i>	2	
<i>Enterobacter spp</i>	2	
<i>Enterococcus spp</i>	2	
<i>Erysipelothrix rhusiopathiae</i>	2	
<i>Escherichia coli</i> (with the exception of non-pathogenic strains)	2	
<i>Escherichia coli</i> ,verocytotoxigenic strains (e.g.O157:H7 or O103)	3 (**) ²	T
<i>Flavobacterium meningosepticum</i>	2	
<i>Fluoribacter bozemanai</i> (<i>Legionella</i>)	2	
<i>Francisella tularensis</i> (Type A)	3	
<i>Francisella tularensis</i> (Type B)	2	
<i>Fusobacterium necrophorum</i>	2	
<i>Gardnerella vaginalis</i>	2	
<i>Haemophilus ducreyi</i>	2	
<i>Haemophilus influenzae</i>	2	
<i>Haemophilus spp</i>	2	
<i>Helicobacter pylori</i>	2	
<i>Klebsiella oxytoca</i>	2	
<i>Klebsiella pneumoniae</i>	2	
<i>Klebsiella spp</i>	2	
<i>Legionella pneumophila</i>	2	
<i>Legionella spp</i>	2	
<i>Leptospira interrogans</i> (all serovars)	2	
<i>Listeria monocytogenes</i>	2	
<i>Listeria invanovii</i>	2	
<i>Morganella morganii</i>	2	
<i>Mycobacterium africanum</i>	3	V
<i>Mycobacterium avium/intracellulare</i>	2	
<i>Mycobacterium bovis</i> (except BCG strain)	3	V
<i>Mycobacterium chelonae</i>	2	
<i>Mycobacterium fortuitum</i>	2	
<i>Mycobacterium kansasii</i>	2	

<i>Mycobacterium leprae</i>	3	
<i>Mycobacterium malmoense</i>	2	
<i>Mycobacterium marinum</i>	2	
<i>Mycobacterium microti</i>	3 (**)	
<i>Mycobacterium paratuberculosis</i>	2	
<i>Mycobacterium scrofulaceum</i>	2	
<i>Mycobacterium simiae</i>	2	
<i>Mycobacterium szulgai</i>	2	
<i>Mycobacterium tuberculosis</i>	3	V
<i>Mycobacterium ulcerans</i>	3 (**)	
<i>Mycobacterium xenopi</i>	2	
<i>Mycoplasma caviae</i>	2	
<i>Mycoplasma hominis</i>	2	
<i>Mycoplasma pneumoniae</i>	2	
<i>Neisseria gonorrhoeae</i>	2	
<i>Neisseria meningitidis</i>	2	V
<i>Nocardia asteroides</i>	2	
<i>Nocardia brasiliensis</i>	2	
<i>Nocardia farcinica</i>	2	
<i>Nocardia nova</i>	2	
<i>Nocardia otitidiscaviarum</i>	2	
<i>Pasteurella mubocida</i>	2	
<i>Pasteurella spp</i>	2	
<i>Peptostreptococcus anaerobius</i>	2	
<i>Plesiomonas shigelloides</i>	2	
<i>Porphyromonas spp</i>	2	
<i>Prevotella spp</i>	2	
<i>Proteus mirabilis</i>	2	
<i>Proteus penneri</i>	2	
<i>Proteus vulgaris</i>	2	
<i>Providencia alcalifaciens</i>	2	
<i>Providencia rettgeri</i>	2	
<i>Providencia spp</i>	2	
<i>Pseudomonas aeruginosa</i>	2	
<i>Rhodococcus equi</i>	2	
<i>Rickettsia akari</i>	3 (**)	
<i>Rickettsia canada</i>	3 (**)	
<i>Rickettsia conorii</i>	3	
<i>Rickettsia montana</i>	3 (**)	
<i>Rickettsia typhi</i> (<i>Rickettsia mooseri</i>)	3	
<i>Rickettsia prowazekii</i>	3	

<i>Rickettsia rickettsii</i>	3	
<i>Rickettsia tsutsugamushi</i>	3	
<i>Rickettsia spp</i>	2	
<i>Salmonella arizonae</i>	2	
<i>Salmonella enteritidis</i>	2	
<i>Salmonella typhimurium</i>	2	
<i>Salmonella paratyphi</i> A, B, C	2	V
<i>Salmonella typhi</i>	3 (**)	V
<i>Salmonella</i> (other serovars)	2	
<i>Serpulina spp</i>	2	
<i>Shigella boydii</i>	2	
<i>Shigella dysenteriae</i> (Type 1)	3 (**)	T
<i>Shigella dysenteriae</i> , other than Type 1	2	
<i>Shigella flexneri</i>	2	
<i>Shigella sonnei</i>	2	
<i>Staphylococcus aureus</i>	2	
<i>Streptobacillus moniliformis</i>	2	
<i>Streptococcus pneumoniae</i>	2	
<i>Streptococcus pyogenes</i>	2	
<i>Streptococcus suis</i>	2	
<i>Streptococcus spp</i>	2	
<i>Treponema carateum</i>	2	
<i>Treponema pallidum</i>	2	
<i>Treponema pertenue</i>	2	
<i>Treponema spp</i>	2	
<i>Vibrio cholerae</i> (including El Tor)	2	
<i>Vibrio parahaemolyticus</i>	2	
<i>Vibrio spp</i>	2	
<i>Yersinia enterocolitica</i>	2	
<i>Yersinia pestis</i>	3	V
<i>Yersinia pseudotuberculosis</i>	2	
<i>Yersinia spp</i>	2	

1. "*spp*" refers to other species which are known pathogens in humans.
2. "**" see paragraph 8 of the introductory note

VIRUSES (*)¹

Biological agent	Classification	Notes
<i>Adenoviridae</i>	2	
<i>Arenaviridae</i>		
LCM-Lassa-virus complex (old world arena viruses)		
Lassa virus	4	
Lymphocytic (strains)	3	
Lymphocytic choriomeningitis virus (other strains)	2	
Mopeia virus	2	
Other LCM-Lassa complex viruses	2	
Tacaribe-Virus-complex (new world arena viruses)		
Guanarito virus	4	
Junin virus	4	
Sabia virus	4	
Machupo virus	4	
Flexal virus	3	
Other Tacaribe complex viruses	2	
<i>Astroviridae</i>	2	
<i>Bunyaviridae</i>		
Belgrade (also known as Dobrava)	3	
Bhanja	2	
Bunyamwera virus	2	
Germiston	2	
Oropouche virus	3	
Sin Nombre (formerly Muerto Canyon)	3	
California encephalitis virus	2	
Hantaviruses		
Hantaan (Korean haemorrhagic fever)	3	
Seoul virus	3	
Puumala virus	2	
Prospect Hill virus	2	
Other hanta viruses	2	
Nairoviruses		
Crimean-Congo haemorrhagic fever	4	
Hazara virus	2	
Phleboviruses		
Rift Valley fever	3	V
Sandfly fever	2	
Toscana virus	2	
Other bunyaviridae known to be pathogenic	2	

<i>Caliciviridae</i>		
Hepatitis E virus	3 (**) ²	
Norwalk virus	2	
Other Caliciviridae	2	
<i>Coronaviridae</i>	2	
<i>Filoviridae</i>		
Ebola virus	4	
Marbourg virus	4	
<i>Flaviviridae</i>		
Australia encephalitis (Murray Valley encephalitis)	3	
Central European tick-borne encephalitis virus	3 (**)	V
Absettarov	3	
Hanzalova	3	
Hypr	3	
Kumlinge	3	
Dengue virus type 1-4	3	
Hepatitis C virus	3 (**)	D
Hepatitis G virus	3 (**)	D
Japanese B encephalitis	3	V
Kyasanur Forest	3	V
Louping ill	3 (**)	
Omsk ⁽³⁾	3	V
Powassan	3	
Rocio	3	
Russian spring-summer encephalitis (TBE) ⁽³⁾	3	V
St Louis encephalitis	3	
Wesselsbron virus	3 (**)	
West Nile fever virus	3	
Yellow fever	3	V
Other flaviviruses known to be pathogenic	2	
<i>Hepadnaviridae</i>		
Hepatitis B virus	3 (**)	V, D
Hepatitis D virus (Delta) ⁽⁴⁾	3 (**)	V, D
<i>Herpesviridae</i>		
Cytomegalovirus	2	
Epstein-Barr virus	2	
Herpesvirus simiae (B virus)	3	
Herpes simplex virus types 1 and 2	2	
Herpesvirus varicella-zoster	2	
Human B-lymphotropic virus (HBLV-HHV6)2	2	
Human herpes virus 7	2	

Human herpes virus 8	2	D
<i>Orthomyxoviridae</i>		
Influenza viruses types A, B and C	2	V ⁽⁵⁾
Tick-borne orthomyxoviridae: Dhori and Thogoto	2	V ⁽⁵⁾
<i>Papovaviridae</i>		
BK and JC viruses	2	D ⁽⁶⁾
Human papillomaviruses	2	D ⁽⁶⁾
<i>Paramyxoviridae</i>		
Measles virus	2	V
Mumps virus	2	V
Newcastle disease virus	2	
Parainfluenza viruses types 1 to 4	2	
Respiratory syncytial virus	2	
<i>Parvoviridae</i>		
Human parvovirus (B 19)	2	
<i>Picomaviridae</i>		
Acute haemorrhagic conjunctivitis virus (AHC)	2	
Coxsackie viruses	2	
Echo viruses	2	
Hepatitis A virus (human enterovirus type 72)	2	V
Polioviruses	2	V
Rhinoviruses	2	
<i>Poxviridae</i>		
Buffalopox virus (7)	2	
Cowpox virus	2	
Elephantpox virus (8)	2	
Milkers' node virus	2	
<i>Molluscum contagiosum virus</i>	2	
Monkeypox virus	3	V
Orf virus	2	
Rabbitpox virus (9)	2	
Vaccinia virus	2	
Variola (major and minor) virus	4	V
Whitepox virus ('Variola virus')	4	V
Yatapox virus (Tana & Yaba)	2	
<i>Reoviridae</i>		
Coltivirus	2	
Human rotaviruses	2	
Orbiviruses	2	
Reoviruses	2	
<i>Retroviridae</i>		

Human immunodeficiency viruses	3(**)	D
Human T-cell lymphotropic viruses (HTLV), types 1 and 2	3 (**)	D
SIV ⁽¹⁰⁾	3 (**)	
<i>Rhabdoviridae</i>		
Rabies virus	3 (**)	V
Vesicular stomatitis virus	2	
<i>Togaviridae</i>		
Alphaviruses		
Eastern equine encephalomyelitis	3	V
Bebaru virus	2	
Chikungunya virus	3 (**)	
Everglades virus	3 (**)	
Mayaro virus	3	
Mucambo virus	3 (**)	
Ndumu virus	3	
O'nyong-nyong virus	2	
Ross River virus	2	
Semliki Forest virus	2	
Sindbis virus	2	
Tonate virus	3 (**)	
Venezuelan equine encephalomyelitis	3	V
Western equine encephalomyelitis	3	V
Other known alpha viruses	2	
Rubivirus (rubella)	2	V
<i>Toroviridae</i>	2	
Unclassified viruses		
Equine morbillivirus	4	
Hepatitis viruses not yet identified	3 (**)	D
Unconventional agents associated with the transmissible spongiform encephalopathies (TSEs)		
Creutzfeldt-Jakob disease	3 (**)	D ⁽⁶⁾
Variant Creutzfeldt-Jakob disease	3 (**)	D ⁽⁶⁾
Bovine spongiform encephalopathy (BSE) and other related animal TSEs ⁽¹¹⁾	3 (**)	D ⁽⁶⁾
Gerstmann-Sträussler-Scheinker syndrome	3 (**)	D ⁽⁶⁾
Kuru	3 (**)	D ⁽⁶⁾

1. (*) See paragraph 7 of the introductory note.

2. (**) See paragraph 8 of the introductory note.

3. Tick-borne encephalitis.

4. Hepatitis D virus is pathogenic in employees only in the presence of simultaneous or secondary infection caused by hepatitis B virus. Vaccination against hepatitis B virus will therefore protect workers who are not affected by hepatitis B virus against hepatitis D virus (Delta).
5. Only for types A and B.
6. Recommended for work involving direct contact with these agents.
7. Two viruses are identified: one a buffalopox type and the other a variant of the Vaccinia virus.
8. Variant of cowpox virus.
9. Variant of Vaccinia.
10. At present there is no evidence of disease in humans caused by the other retroviruses of simian origin. As a precaution containment level 3 is recommended for work with them.
11. There is no evidence in humans of infections caused by the agents responsible for other animal TSEs. Nevertheless, the containment measures for agents categorised in risk group 3 (***) are recommended as a precaution for laboratory work, except for laboratory work relating to an identified agent of scrapie, where containment level 2 is sufficient.

PARASITES

Biological agent	Classification	Notes
<i>Acanthamoeba castellani</i>	2	
<i>Ancylostoma duodenale</i>	2	
<i>Angiostrongylus cantonensis</i>	2	
<i>Angiostrongylus costaricensis</i>	2	
<i>Ascaris lumbricoides</i>	2	A
<i>Ascaris suum</i>	2	A
<i>Babesia divergens</i>	2	
<i>Babesia microti</i>	2	
<i>Balantidium coli</i>	2	
<i>Brugia malayi</i>	2	
<i>Brugia pahangi</i>	2	
<i>Capillaria philippinensis</i>	2	
<i>Capillaria spp</i>	2	
<i>Clonorchis sinensis</i>	2	
<i>Clonorchis viverrini</i>	2	
<i>Cryptosporidium parvum</i>	2	
<i>Cryptosporidium spp</i>	2	
<i>Cyclospora cayetanensis</i>	2	
<i>Dipetalonema streptocerca</i>	2	
<i>Diphyllobothrium latum</i>	2	
<i>Dracunculus medinensis</i>	2	
<i>Echinococcus granulosus</i>	3 (**) ¹	
<i>Echinococcus multilocularis</i>	3 (**)	
<i>Echinococcus vogeli</i>	3 (**)	
<i>Entamoeba histolytica</i>	2	
<i>Fasciola gigantica</i>	2	
<i>Fasciola hepatica</i>	2	
<i>Fasciolopsis buski</i>	2	
<i>Giardia lamblia (Giardia intestinalis)</i>	2	
<i>Hymenolepis diminuta</i>	2	
<i>Hymenolepis nana</i>	2	
<i>Leishmania brasiliensis</i>	3 (**)	
<i>Leishmania donovani</i>	3 (**)	
<i>Leishmania ethiopia</i>	2	
<i>Leishmania mexicana</i>	2	
<i>Leishmania peruviana</i>	2	
<i>Leishmania tropica</i>	2	
<i>Leishmania major</i>	2	
<i>Leishmania spp</i>	2	

Loa loa	2	
Mansonella ozzardi	2	
Mansonella persians	2	
Naegleria fowleri	3	
Necator americanus	2	
Onchocerca volvulus	2	
Opisthorchis felineus	2	
Opisthorchis spp	2	
Paragonimus westermani	2	
Plasmodium falciparum	3 (**)	
Plasmodium spp (human and simian)	2	
Sarcocystis suihominis	2	
Schistosoma haematobium	2	
Schistosoma intercalatum	2	
Schistosoma japonicum	2	
Schistosoma mansoni	2	
Schistosoma mekongi	2	
Strongyloides stercoralis	2	
Strongyloides spp	2	
Taenia saginata	2	
Taenia solium		
Toxocara canis	2	
Toxoplasma gondii	2	
Trichinella spiralis	2	
Trichuris trichiura	2	
Trypanosoma brucei brucei	2	
Trypanosoma brucei gambiense	2	
Trypanosoma brucei rhodesiense	3 (**)	
Trypanosoma cruzi	3	
Wuchereria bancrofti	2	

1. (**) See paragraph 8 of the introductory notes.

FUNGI

Biological agent	Classification	Notes
<i>Aspergillus fumigatus</i>	2	A
<i>Blastomyces dermatitidis</i> (<i>Ajellomyces dermatitidis</i>)	3	
<i>Candida albicans</i>	2	A
<i>Candida tropicalis</i>	2	
<i>Cladophialophora bantiana</i> (formerly: <i>Xylohypha bantiana</i> , <i>Cladosporium bantianum</i> or <i>trichoides</i>)	3	
<i>Coccidioides immitis</i>	3	A
<i>Cryptococcus neoformans</i> var. <i>neofonnans</i> (<i>Filobasidiella neofonnans</i> var. <i>neofonnans</i>)	2	A
<i>Cryptococcus neoformans</i> var. <i>gattii</i> (<i>Filobasidiella bacillispora</i>)	2	A
<i>Emmonsia parva</i> var. <i>parva</i>	2	
<i>Emmonsia parva</i> var. <i>crescens</i>	2	
<i>Epidermophyton floccosum</i>	2	A
<i>Fonsecaea compacta</i>	2	
<i>Fonsecaea pedrosoi</i>	2	
<i>Histoplasma capsulatum</i> var. <i>capsulatum</i> (<i>Ajellomyces capsulatus</i>)	3	
<i>Histoplasma capsulatum duboisii</i>	3	
<i>Madurella grisea</i>	2	
<i>Madurella mycetomatis</i>	2	
<i>Microsporium spp</i>	2	A
<i>Neotestudina rosatii</i>	2	
<i>Paracoccidioides brasiliensis</i>	3	
<i>Penicillium marneffeii</i>	2	A
<i>Scedosporium apiospermum</i> (<i>Pseudallescheria bogdii</i>)	2	
<i>Scedosporium prolificans</i> (<i>inflatum</i>)	2	
<i>Sporothrix schenckii</i>	2	
<i>Trichophyton rubrum</i>	2	
<i>Trichophyton spp</i>	2	

SCHEDULE 2
(Regulation 18(4)(a))

CONTAINMENT FOR INDUSTRIAL PROCESSES

Column A	Column B		
Containment measures	Containment levels		
	2	3	4
1. Viable organisms should be handled in a system which physically separates the process from the environment	yes	yes	yes
2. Exhaust gases from the closed system should be treated so as to:	minimise release	prevent release	prevent release
3. Sample collection, addition of materials to a closed system and transfer of viable organisms to another closed system, should be performed so as to:	minimise release	prevent release	prevent release
4. Bulk culture fluids should not be removed from the closed system unless the viable organisms have been:	inactivated by validated means	inactivated by validated chemical or physical means	inactivated by validated chemical or physical means
5. Seals should be designed so as to:	minimise release	prevent release	prevent release
6. Closed systems should be located within a controlled area	optional	optional	yes, and purpose-built
(a) biohazard signs should be posted	optional	yes	yes
(b) access should be restricted to nominated personnel only	optional	yes	yes, via an airlock
(c) personnel should wear protective clothing	yes, work clothing	yes	yes, a complete change
(d) decontamination and washing facilities should be provided for personnel	yes	yes	yes

(e) personnel should shower before leaving the controlled area	no	optional	yes
(f) effluent from sinks and showers should be collected and inactivated before release	no	optional	yes
(g) the controlled area should be adequately ventilated to minimise air contamination	optional	optional	yes
(h) the controlled area should be maintained at an air pressure negative to atmosphere	no	optional	yes
(i) input air and extract air to the controlled area should be HEPA filtered	no	optional	yes
(j) the controlled area should be designed to contain spillage of the entire contents of the closed system	no	optional	yes
(k) the controlled area should be sealable to permit fumigation	no	optional	yes
(l) effluent treatment before final discharge	Inactivated by validated means	Inactivated by validated chemical or physical means	Inactivated by validated chemical or physical means

SCHEDULE 3
(Regulation 6(2))

INDICATIVE LIST OF ACTIVITIES

1. - (1) Sub-paragraph (2) below contains an indicative list of activities which do not involve a deliberate intention to work with or use a biological agent but may result in employees being exposed thereto:-

(2) The indicative list referred to in sub-paragraph (1) above follows:-

- (a) work in food production plants;
- (b) work in agriculture;
- (c) work where there is contact with animals or products of animal origin;
- (d) work in healthcare, including isolation and post-mortem units;
- (e) work in clinical, veterinary and diagnostic laboratories, excluding diagnostic microbiological laboratories;
- (f) work in refuse disposal plants;
- (g) work in sewage purification installations.

SCHEDULE 4
(Regulation 8(2)(e))
BIOHAZARD SIGN



SCHEDULE 5

(Regulation 16(4) and paragraph 10(3) of Schedule 1)

CODE OF PRACTICE ON VACCINATION

1. Where the risk assessment shows there is a risk to the health and safety of any employee due to his exposure to any biological agent for which an effective vaccine exists, his employer should offer him vaccination.
2. Vaccination should be carried out in accordance with any relevant Republican law or practice or both, as appropriate.
3. The employee should be informed of the benefits and drawbacks of both vaccination and non-vaccination.
4. Vaccination must be offered free of charge to the employee concerned.
5. A vaccination certificate shall be drawn up, made available to the employee concerned and, upon his request, given to him; and a copy thereof shall be made available to the Chief Inspector or any Inspector, upon his request.

SCHEDULE 6
(Regulation 16(10))

**PRACTICAL RECOMMENDATIONS FOR THE HEALTH
SURVEILLANCE OF EMPLOYEES**

1. The medical practitioner responsible for the health surveillance of any employee exposed to any biological agent shall be familiar with the exposure conditions or circumstances of each such employee.

2. The health surveillance of any employee shall be carried out in accordance with the principles and practices of occupational medicine and shall include at least the following measures:-

- (a) keeping a record of the medical and occupational history of the employee;
- (b) a personalised assessment of the employee's state of health;
- (c) where appropriate, biological monitoring, as well as detection of early and reversible effects.

3. Further medical tests may be decided on for each employee who is the subject of health surveillance, in the light of the most recent knowledge available to occupational medicine.

SCHEDULE 7
(Regulation 17(3), 18(3)(a))

**INDICATIONS CONCERNING CONTAINMENT MEASURES AND
CONTAINMENT LEVELS**

Column A	Column B		
Containment measures	Containment levels		
	2	3	4
1. The workplace is to be separated from any other activities in the same building	No	Recommended	Yes
2. Input air and extract air to the workplace are to be filtered using (HEPA) or likewise	No	Yes, on extract air	Yes, on input and extract air
3. Access is to be restricted to nominated persons at work only	Recommended	Yes	Yes, via airlock
4. The workplace is to be sealable to permit disinfection	No	Recommended	Yes
5. Specified disinfection procedures	Yes	Yes	Yes
6. The workplace is to be maintained at an air pressure negative to atmosphere	No	Recommended	Yes
7. Efficient vector control, for example rodents and insects	Recommended	Yes	Yes
8. Surfaces impervious to water and easy to clean	Yes, for bench	Yes, for bench and floor	Yes, for bench, walls, floor and ceiling
9. Surfaces resistant to acids, alkalis, solvents, disinfectants	Recommended	Yes	Yes
10. Safe storage of a biological agent	Yes	Yes	Yes, secure storage
11. An observation window, or alternative, is to be present, so that occupants can be seen	Recommended	Recommended	Yes
12. A laboratory is to contain own equipment	No	Recommended	Yes

13. Infected material including any animal is to be handled in a safety cabinet or isolation or other suitable containment	Where appropriate	Yes, where infection is by airborne route	Yes
14. Incinerator for disposal of animal carcasses	Recommended	Yes (available)	Yes, on site

Dated this 18th day of July 2002.

By the Administrator's Command,
D.J. BONNER,
Chief Officer,
Sovereign Base Areas.

(107/6)

No. 67

THE HEALTH AND SAFETY AT WORK ORDINANCE 1999

REGULATIONS MADE UNDER SECTION 38.

In exercise of the powers vested in him by section 38 of the Health and Safety at Work Ordinance 1999^(a) and of all other powers enabling him in that behalf, the Administrator hereby makes the following Regulations:-

PART I – GENERAL PROVISIONS

Citation

1. These Regulations may be cited as the Health and Safety at Work (Manual Handling of Loads) Regulations 2002.

Interpretation

2. – (1) In these Regulations, unless the context otherwise requires:-

‘load’ includes any person and any animal;

‘manual handling of a load’ means any transporting or supporting of a load (including lifting, putting down, pushing, pulling, carrying or moving thereof), by hand or by bodily force, which, by reason of its characteristics or of the unfavourable ergonomic conditions, involves a risk of injury, particularly to the back of the person carrying out the task;

‘the Ordinance’ means the Health and Safety at Work Ordinance 1999.

(2) In these Regulations, any reference to a numbered regulation or a numbered Schedule is a reference to the regulation or Schedule so numbered in these Regulations.

(3) In these Regulations, any duty imposed upon:-

- (a) an employer in respect of his employees;
- (b) an employee,

shall be imposed upon a self-employed person in respect of himself.

Application

3. These Regulations shall apply to and in relation to the manual handling of loads and prescribe the minimum health and safety requirements for the carrying out of such tasks.

PART II - EMPLOYERS OBLIGATIONS

Employers general obligations

4. – (1) Every employer shall take the appropriate organisational measures or use the appropriate means, in particular the appropriate mechanical equipment, in order to avoid the need for the manual handling of loads.

^(a) Ordinance 6 of 1999.

(2) Where the need for the manual handling of loads cannot be avoided, the employer shall take the appropriate organisational measures, use the appropriate means or provide his employees with such means in order to reduce the risk of injury involved therein, having regard to the factors listed in Schedule 1.

Organisation of employee workstations etc.

5. Wherever the need for the manual handling of loads cannot be avoided, the employer shall:-

- (a) organise workstations in such a way as to make such handling as safe and healthy as possible;
- (b) assess, in advance if possible, the health and safety conditions of the type of work involved, and, in particular, examine the characteristics of loads referred to in Schedule 1; and
- (c) take care to avoid or reduce the risk of injury involved by taking appropriate measures, taking into account, in particular, the characteristics of the working environment and the requirements of the work referred to in Schedule 1.

Characteristics of employees to be taken into account

6. When determining which of his employees shall be assigned the task of the manual handling of a load the employer shall have regard to:-

- (a) the factors listed in Schedule 2;
- (b) whether any such employee belongs to a high risk group; and
- (c) the state of health of his employees.

Provisions of information and training for employees

7. - (1) Every employer shall ensure that his employees or their representatives or both are informed of all the measures to be implemented pursuant to these Regulations, for the purposes of protecting their health and safety.

(2) Every employer shall ensure that those of his employees who are to undertake the manual handling of loads or their representatives or both are provided with general indications and, where possible, precise information on:-

- (a) the weight of each load;
- (b) the centre of gravity of the heaviest side of any load whose centre of gravity is not positioned centrally.

(3) Every employer shall ensure that those of his employees who are to undertake the manual handling of loads are provided with adequate training and accurate information on how to handle loads correctly and the risks they might be exposed to, particularly if such tasks are not performed correctly, having regard to the factors listed in Schedules 1 and 2.

Consultation and participation of employees

8. Every employer shall consult and permit the participation of his employees or their representatives or both on the matters covered by these Regulations.

PART III - EMPLOYEES OBLIGATIONS**Duty of employees**

9. Every employee who is to undertake the manual handling of any load shall make full and proper use of any means and any system of work provided for his use by his employer pursuant to regulation 4(2).

SCHEDULE 1**REFERENCE FACTORS (TO WHICH THE EMPLOYER MUST HAVE REGARD IN RELATION TO THE MANUAL HANDLING OF ANY LOAD)**

(Regulations 4(2), 5 and 7(3))

With a view to multi-factor analysis, reference may be made simultaneously to the factors listed below.

1. Characteristics of the load

The manual handling of a load may present a risk of injury, particularly to the back, if the load is:-

- (a) too heavy or too large;
- (b) unwieldy or difficult to grasp;
- (c) unstable or has contents likely to shift;
- (d) positioned in a manner requiring it to be held or manipulated at a distance from the trunk or with a bending or twisting of the trunk;
- (e) likely, because of its contours or consistency or both to result in injury to any person at work, particularly in the event of a collision.

2. Physical effort required

A physical effort may present a risk of injury, particularly to the back, if it is:-

- (a) too strenuous;
- (b) only achieved by a twisting movement of the trunk;
- (c) likely to result in a sudden movement of the load;
- (d) made with the body in an unstable posture.

3. Characteristics of the working environment

The characteristics of the working environment may increase the risk of injury, particularly to the back, if:-

- (a) there is not enough room, in particular vertically, to carry out the activity;
- (b) the floor is uneven, thus presenting tripping hazards, or is slippery in relation to the footwear of the person at work;
- (c) the place of work or the working environment prevents the manual handling of loads at a safe height or with good posture by the person at work;
- (d) there are variations in the level of the floor or the working surface, requiring the load to be manipulated on different levels;
- (e) the floor or foot rest is unstable;
- (f) the temperature, humidity or ventilation is unsuitable.

4. Requirements of the work

The work may present a risk of injury, particularly to the back, if it entails:-

- (a) over-frequent or over-prolonged physical effort involving, in particular, the spine;
- (b) an insufficient rest or recovery period;
- (c) excessive lifting, lowering or carrying distances; or
- (d) a rate of work imposed by a process which cannot be altered by the person at work.

SCHEDULE 2

**INDIVIDUAL RISK FACTORS (TO WHICH THE
EMPLOYER MUST HAVE REGARD IN RELATION TO
THE MANUAL HANDLING OF ANY LOAD)**

(Regulations 6(a) and 7(3))

With a view to multi-factor analysis, reference may be made simultaneously to the individual risk factors listed below.

Any person at work may be at risk if he:-

- (a) is physically unsuited to carry out the task in question;
- (b) is wearing unsuitable clothing, footwear or other personal articles;
- (c) does not have adequate or appropriate knowledge or training.

Dated this 18th day of July 2002.

By the Administrator's Command,
D.J. BONNER,
Chief Officer,
Sovereign Base Areas.

(107/6)

No. 68

THE HEALTH AND SAFETY AT WORK ORDINANCE 1999
(Ordinance 6 of 1999)

REGULATIONS MADE UNDER SECTION 38

In exercise of the powers vested in him by section 38 and paragraphs 11 and 14 of the Schedule of the Health and Safety at Work Ordinance 1999^(a), the Administrator hereby makes the following Regulations:-

Citation

1. These Regulations may be cited as the Health and Safety at Work (Use of Personal Protective Equipment) Regulations 2002.

Interpretation

2. - (1) In these Regulations, unless the context otherwise requires:-

“maintenance”, in relation to personal protective equipment, includes cleaning, servicing and repair, and “maintained” and other related expressions shall be construed accordingly;

“the Ordinance” means the Health and Safety at Work Ordinance 1999;

“personal protective equipment” means any equipment designed to be worn or held by any employee to protect him against one or more hazards likely to endanger his health or safety at work and any addition or accessory designed to meet this objective and includes clothing which provides protection against weather conditions, but excludes the following:-

- (a) ordinary working clothes and uniforms not specifically designed to protect the health or safety of the user;
- (b) protective equipment used by emergency or rescue services;
- (c) protective equipment used by the military, the police or other public order agencies;
- (d) protective equipment used whilst travelling by road;
- (e) protective sports equipment;
- (f) self-defence or deterrent equipment;
- (g) portable devices used for detecting or signalling hazards or nuisances.

“use”, in relation to personal protective equipment, means the wearing or holding of such equipment, as appropriate, and “user” and other related expressions shall be construed accordingly.

(2) In these Regulations, unless the context otherwise requires:-

- (a) any reference to a numbered regulation or a numbered Schedule shall be a reference to the regulation or Schedule so numbered in these Regulations;

^(a) Ordinance 6 of 1999.

- (b) any reference to a numbered paragraph shall be a reference to the paragraph so numbered in the regulation or Schedule in which it appears.

Application

3. - (1) These Regulations prescribe the minimum health and safety requirements for the use, by employees, of personal protective equipment at work.

(2) Where any duty is imposed by these Regulations on any employer in respect of his employees, he shall, so far as is reasonably practicable, be under a like duty in respect of any other person on the premises who may be affected by the work carried on by the employer, except that the duties of an employer under regulation 10 (consultation and participation of employees) shall not extend to persons who are not his employees.

(3) These Regulations shall apply to a self-employed person as they apply to an employer and an employee and as if that self-employed person were both an employer and an employee, except that regulation 10 shall not apply to a self-employed person.

Use of personal protective equipment

4. Personal protective equipment shall be used where the risks to health and safety cannot be avoided or adequately controlled by other means, including:-

- (a) technical measures;
- (b) collective protection measures; or
- (c) methods of organising the work.

Provision of personal protective equipment

5. - (1) Every employer shall ensure that suitable personal protective equipment is provided to those employees who may be exposed to any risk to their health or safety at work, except where and to the extent that such risk has been adequately controlled by other means which are equally or more effective.

(2) Without prejudice to the generality of paragraph (1), personal protective equipment shall not be suitable unless:-

- (a) it is appropriate for the risks involved and the conditions at the workplace;
- (b) it takes account of ergonomic requirements and the state of health of the user;
- (c) it is capable of being used correctly, if necessary after any adjustment within the range of tolerance anticipated by the designer; and
- (d) it complies with any health and safety legislation concerning the design or manufacture thereof.

(3) Every employer shall ensure that where the presence of more than one risk to health or safety makes it necessary for any of his employees to use simultaneously more than one item of personal protective equipment, such equipment is compatible and continues to be effective against the risks in question.

(4) Every employer shall ensure that the conditions of use of personal protective equipment (including, in particular, the period for which it is being used) are determined on the basis of:-

- (a) the seriousness of the risk;
- (b) the frequency of exposure to the risk;
- (c) the characteristics of the workstation of each employee; and
- (d) the performance of the personal protective equipment.

(5) Where the circumstances require personal protective equipment to be worn by more than one employee, the employer shall ensure that appropriate measures are taken so that such use does not create any health or hygiene problem for the different users.

(6) Personal protective equipment shall be provided free of charge by the employer.

(7) Every employer shall ensure that appropriate accommodation is provided for the storage of personal protective equipment provided by him pursuant to paragraph (1), when it is not being used.

Assessment of personal protective equipment

6. – (1) Before selecting any personal protective equipment, the employer shall make an assessment to determine whether the equipment he intends to provide will be suitable.

(2) The assessment required by paragraph (1) shall include:-

- (a) an analysis and assessment of any risks to health or safety which cannot be avoided by other means;
- (b) the definition of the characteristics which personal protective equipment must have in order to be effective against the risks referred to in subparagraph (a) above, taking into account any risks which the equipment itself may create;
- (c) comparison of the characteristics of the personal protective equipment available with the characteristics referred to in subparagraph (b) above,

and shall be recorded in writing.

(3) When making the assessment pursuant to paragraph (1), the employer shall have regard to Schedule 1.

(4) For the purposes of paragraph (1), the employer may require the manufacturer, importer or supplier of the personal protective equipment to provide him with relevant information concerning such equipment.

(5) The employer shall review any assessment made by him pursuant to paragraph (1) when:-

- (a) there has been a significant change in any of the matters to which it relates; or
- (b) there is reason to suspect that such assessment is no longer valid,

and revise the assessment accordingly.

Conditions and rules of use of personal protective equipment

7. - (1) Without prejudice to regulations 4, 5 and 6, every employer shall take the necessary measures to protect the health and safety of those employees who use personal protective equipment.

(2) Without prejudice to the generality of paragraph (1), the employer shall:-

- (a) establish the conditions under which personal protective equipment must be used;
- (b) select and specify the personal protective equipment to be used in such conditions;
- (c) establish the rules of use of such equipment, having regard to the manufacturer's instructions for use; and
- (d) take all reasonable steps to ensure that such equipment is properly used.

(3) The employer shall have regard to Schedules 2 to 4 for the purposes of paragraph (2).

Maintenance and replacement of personal protective equipment

8. Every employer shall ensure that any personal protective equipment provided by him for use by his employees is:-

- (a) maintained in an efficient state, in good working order and in a satisfactory hygienic condition; and
- (b) replaced, where appropriate.

Information, instructions and training for employees

9. - (1) Without prejudice to any other health and safety legislation concerning the provision of information to employees, every employer shall provide his employees with:-

- (a) information concerning the risks to health and safety against which their use of personal protective equipment offers protection;
- (b) information concerning the measures to be taken with regard to their health and safety when personal protective equipment is used by them;
- (c) adequate information on each item of personal protective equipment to be used by them; and
- (d) suitable and sufficient instructions and training, including demonstrations where appropriate, in the use of personal protective equipment.

(2) Every employer shall ensure that information and instructions provided pursuant to paragraph (1) are clear and understandable to the employees.

Consultation and participation of employees

10. Every employer shall consult and permit the participation of his employees or their representatives or both in relation to the matters covered by these Regulations in accordance with any provisions of the Ordinance and any Regulations made thereunder concerning the consultation and participation of employees.

Employees' obligations

11. Every employee who has been provided with any personal protective equipment pursuant to these Regulations shall:-

- (a) use such equipment in accordance with any information, instructions and training he has received concerning its use, pursuant to regulation 9;
- (b) take all reasonable steps to ensure that such equipment is returned to the accommodation provided for it, after use;
- (c) report immediately to his employer any loss of or obvious defect in such equipment.

Manufacturers, importers and suppliers' obligations

12. – (1) Every manufacturer, importer and supplier of personal protective equipment shall:-

- (a) manufacture, import or supply, as the case may be, only personal protective equipment which complies with any relevant health and safety legislation concerning the design and manufacture of such equipment;
- (b) provide instructions for use in Greek and English, which shall include, at least, the particulars referred to in any legislation concerning the placement on the market of personal protective equipment;
- (c) provide the information referred to in regulation 6(4).

(2) Personal protective equipment which does not comply with any relevant health and safety legislation concerning the design and manufacture thereof may be referred to or depicted in educational or informative literature but only if accompanied by a clear notice stating that it does not comply with such provisions and must not be used at work unless and until such time as it is rendered compliant by the manufacturer or, where the manufacturer is not established in any of the member States of the European Union, by his agent in the European Union.

Commencement

13. These Regulations shall come into force three months after their publication in the Gazette.

SCHEDULE 2
(Regulation 7)**NON-EXHAUSTIVE GUIDE LIST OF ITEMS OF PERSONAL
PROTECTIVE EQUIPMENT****1. HEAD PROTECTION**

Protective helmets for use in industry (mines, building sites, other industrial uses).

Scalp protection (caps, bonnets, hairnets - with or without eye shade).

Protective headgear (bonnets, caps, sou'westers, etc. in fabric, fabric with proofing, etc.).

2. HEARING PROTECTION

Earplugs and similar devices.

Full acoustic helmets.

Earmuffs which can be fitted to industrial helmets.

Ear defenders with receiver for LF induction loop.

Ear protection with intercom equipment.

3. 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).

4. RESPIRATORY PROTECTION

Dust filters, gas filters and radioactive dust filters.

Insulating appliances with an air supply.

Respiratory devices including a removable welding mask.

Diving equipment.

Diving suits.

5. HAND AND ARM PROTECTION

Gloves to provide protection:-

- from machinery (piercing, cuts, vibrations, etc.);

- from chemicals;

- for electricians and from heat.

Mittens.

Finger stalls.

Oversleeves.

Wrist protection for heavy work.

Fingerless gloves.

Protective gloves for leather workers.

6. 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.

Gaiters.

Removable soles (heat-proof, pierce-proof or sweat-proof).

Removable spikes for ice, snow or slippery flooring.

7. SKIN PROTECTION

Barrier creams/ointments.

8. TRUNK AND ABDOMEN PROTECTION

Protective waistcoats, jackets and aprons to provide protection from machinery (piercing, cutting, molten metal splashes, etc.).

Protective waistcoats, jackets and aprons to provide protection from chemicals.

Heated waistcoats.

Life jackets.

Protective X-ray aprons.

Body belts.

9. 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 splashes 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 (armbands, gloves, etc.).

Protective coverings.

SCHEDULE 3
(Regulation 7)

NON-EXHAUSTIVE GUIDE LIST OF ACTIVITIES AND SECTORS OF ACTIVITY WHICH MAY REQUIRE THE PROVISION OF PERSONAL PROTECTIVE EQUIPMENT

1. HEAD PROTECTION (SKULL PROTECTION)

Protective helmets for use in:-

- (a) building work, particularly work on, underneath or in the vicinity of scaffolding and elevated workplaces, erection and stripping of formwork, assembly and installation work, work on scaffolding and demolition work;
- (b) 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;
- (c) work in pits, trenches, shafts and tunnels;
- (d) earth and rock works;
- (e) work in underground workings, quarries, open diggings, coal stock removal;
- (f) work with bolt-driving tools;
- (g) blasting work;
- (h) work in the vicinity of lifts, lifting gear, cranes and conveyors;
- (i) work with blast furnaces, direct reduction plants, steelworks, rolling mills, metalworks, forging, drop forging and casting;
- (j) work with industrial furnaces, containers, machinery, silos, bunkers and pipelines;
- (k) shipbuilding;
- (l) railway shunting work;
- (m) slaughterhouses.

2. FOOT PROTECTION

- (1) Safety shoes with puncture-proof soles for use in:-
 - (a) carcase work, foundation work and roadworks;
 - (b) scaffolding work;
 - (c) the demolition of carcase work;
 - (d) work with concrete and prefabricated parts involving formwork erection and stripping;
 - (e) work in contractors' yards and warehouses;
 - (f) roof work.
- (2) Safety shoes without pierce-proof soles, 'wedges' for use in:-

- (a) 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;
 - (b) furnace construction, heating and ventilation installation and metal assembly work;
 - (c) conversion and maintenance work;
 - (d) work with blast furnaces, direct reduction plants, steelworks, rolling mills, metalworks, forging, drop forging, hot pressing and drawing plants;
 - (e) work in quarries, open diggings and coal stock removal;
 - (f) working and processing of rock;
 - (g) flat glass products and container glassware manufacture, working and processing;
 - (h) work with moulds in the ceramics industry;
 - (i) lining of kilns in the ceramics industry;
 - (j) moulding work in the ceramic ware and building materials industry;
 - (k) transport and storage;
 - (l) work with frozen meat blocks and preserved foods packaging;
 - (m) shipbuilding;
 - (n) railway shunting work.
- (3) Safety shoes with heels or wedges and pierce-proof soles for use in roof work.
- (4) Protective shoes with insulated soles for use in work with and on very hot or very cold materials.
- (5) Safety shoes which can easily be removed for use where there is a risk of penetration by molten substances.

3. EYE OR FACE PROTECTION

Protective goggles, face shields or screens for use in:-

- (a) welding, grinding and separating work;
- (b) caulking and chiselling;
- (c) rock working and processing;
- (d) work with bolt-driving tools;
- (e) work on stock removing machines for small chippings;
- (f) drop forging;
- (g) the removal and breaking up of glass or ceramic material fragments;
- (h) spraying of abrasive substances;
- (i) work with acids and caustic solutions, disinfectants and corrosive cleaning products;
- (j) work with liquid sprays;

- (k) work with and in the vicinity of molten substances;
- (l) work with radiant heat;
- (m) work with lasers.

4. RESPIRATORY PROTECTION

Respirators/breathing apparatus for use in:-

- (a) work in containers, restricted areas and gas-fired industrial furnaces where there may be a contamination hazard by gas or insufficient oxygen;
- (b) work in the vicinity of the blast furnace charge;
- (c) work in the vicinity of gas converters and blast furnace gas pipes;
- (d) work in the vicinity of blast furnace taps where there may be heavy metal fumes;
- (e) work on the lining of furnaces and ladles where there may be dust;
- (f) spray painting where dedusting is inadequate;
- (g) work in shafts, sewers and other underground areas connected with sewage;
- (h) work in refrigeration plants where there is a danger that the refrigerant may escape.

5. HEARING PROTECTION

Ear protectors for use in:-

- (a) work with metal presses;
- (b) work with pneumatic drills;
- (c) the work of ground staff at airports;
- (d) pile-driving work;
- (e) wood and textile working.

6. BODY, ARM AND HAND PROTECTION

(1) Protective clothing for use in:-

- (a) work with acids and caustic solutions, disinfectants and corrosive cleaning substances;
- (b) work with or in the vicinity of hot materials and where the effects of heat are felt;
- (c) work on flat glass products;
- (d) shot blasting;
- (e) work in deep-freeze rooms.

(2) Fire-resistant protective clothing for use in welding in restricted areas.

(3) Pierce-proof aprons for use in:-

- (a) boning and cutting work;
- (b) work with hand knives involving drawing the knife towards the body.

(4) Leather aprons for use in:-

- (a) welding;
- (b) forging;
- (c) casting.

(5) Forearm protection for use in boning and cutting.

(6) Gloves for use in:-

- (a) welding;
- (b) handling of sharp-edged objects, other than machines where there is a danger of the glove's being caught;
- (c) unprotected work with acids and caustic solutions.

(7) Metal mesh gloves for use in:-

- (a) boning and cutting;
- (b) regular cutting using a hand knife for production and slaughtering;
- (c) changing the knives of cutting machines.

7. WEATHERPROOF CLOTHING

For use in work in the open air in rain and cold weather.

8. REFLECTIVE CLOTHING

For use in work where the workers must be clearly visible.

9. SAFETY HARNESES

For use in:-

- (a) work on scaffolding;
- (b) assembly of prefabricated parts;
- (c) work on masts.

10. SAFETY ROPES

For use in:-

- (a) work in high crane cabs;
- (b) work in high cabs of warehouse stacking and retrieval equipment;
- (c) work in high sections of drilling towers;
- (d) work in shafts and sewers.

11. SKIN PROTECTION

For use in:-

- (a) processing of coating materials;
- (b) tanning.

SCHEDULE 4
(Regulation 7)

**NON EXHAUSTIVE INFORMATION FOR EVALUATING
VARIOUS TYPES OF PERSONAL PROTECTIVE EQUIPMENT**

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

1. INDUSTRIAL HELMETS

Hazard	Origin and type of hazard	Safety and performance criteria for selection of equipment
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HAZARDS TO BE COVERED

Mechanical	Objects falling, impact	Absorption of impact
	Lateral crushing	Resistance to puncture Lateral resistance
	Stud drivers	Resistance to shots
Electrical	Low-voltage electricity	Electrical insulation
Thermal	Cold or heat	Maintenance of protective characteristics at high and low temperatures
	Splashes of molten metal	Resistance to splashes of molten metal
Non-visibility	Not sufficiently noticeable	Luminous/reflective colour

HAZARDS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort	Ergonomic design:- - weight - headroom - head fit - ventilation
Accidents and health hazards	Poor compatibility	Quality of materials
	Poor hygiene	Ease of maintenance
	Poor stability, helmet falls off	Helmet remains securely on the head
	Contact with flames	Non-flammability and resistance to flame
Ageing of equipment	Exposure to weather, ambient conditions, cleaning, use	Resistance to industrial wear and tear Maintenance of characteristics throughout useful life

HAZARDS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	Wrong choice of equipment	Select equipment in line with the nature and scale of hazards and industrial stresses:- - 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 hazard Follow manufacturer's instructions
	Equipment dirty, worn or deteriorated	Maintain in good condition Regular checks Replace in good time Follow manufacturer's instructions

2. GOGGLES AND VISORS

Hazard	Origin and type of hazard	Safety and performance criteria for selection of equipment
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HAZARDS TO BE COVERED

Non specific	Stress arising from use	Eyepiece with adequate mechanical resistance and shatter-resistant
	Puncturing by low-power foreign bodies	Imperviousness and resistance
Mechanical	High-speed particles, splinters, splashing Stud drivers	Mechanical resistance
Thermal/Mechanical	Burning particles at high speed	Resistance to burning or molten materials
Cold	Hypothermia of the eyes	Close fit to face
Chemical	Irritation from:- - gases - aerosols - dusts - fumes	Imperviousness (lateral protection and chemical resistance)
Radiation	Technical sources of infra-red, visible and ultraviolet radiation, ionising radiation and laser rays Natural radiation: daylight	Filtering capacity of eyepiece Imperviousness to radiation of frame Frame opaque to radiation

HAZARDS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort:- -too bulky	Ergonomic design:- - reduced bulk
	- increased perspiration	- adequate ventilation, anti-misting eye-piece
	- inadequate grip, contact pressure too high	- individual adaptability to the user

Accidents and health hazards	Poor compatibility Poor hygiene	Quality of materials Ease of maintenance
	Risk of cuts from sharp edges	Rounded edges and rims Use of safety eyepieces
	Impairment of vision caused by poor optical quality, e.g. distortion of images, modification of colours, in particular, signals, diffusion	Check optical quality Use abrasion-proof eyepieces
	Reduction of field of visibility Reflection	Eyepieces of adequate size Anti-reflective eyepieces and frame
	Sudden severe changes in transparency (light-dark) Misty eyepieces	Eyepiece light reaction speed (photochromatic) Anti-misting facility
Ageing of equipment	Exposure to weather, ambient conditions, cleaning, use	Resistance to industrial wear and tear Maintenance of characteristics throughout useful life

HAZARDS ARISING FROM THE USE OF EQUIPMENT

Inadequate protection	Wrong choice of equipment	Select equipment in line with the type and scale of the hazards and industrial stresses:- - 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 hazard 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

Hazards	Origin and type of hazards	Safety and performance criteria for selection of equipment
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HAZARDS TO BE COVERED

Noise	Continuous noise Impulse noise	Sufficient noise reduction for all types of noise
Thermal	Metal splashing, e.g. during welding	Resistance to molten or burning material

HAZARDS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort:- -too bulky -too much pressure	Ergonomic design:- - bulk - pressure when worn and effort required to keep in place
	-increased perspiration -inadequate grip	- adaptability to individual requirements
Restriction of hearing capacity	Deterioration of ability to understand words, recognise signals and key sounds during work and to locate direction of noise	Variation in noise reduction depending on frequency, reduction in hearing performance Possibility of replacing shells with earplugs Audio tests before selection Use of appropriate electro-acoustic protection

Accidents and health hazards	Poor compatibility Poor hygiene	Quality of materials Ease of maintenance
	Unsuitable materials	Possibility of replacing muffs with shells, use of disposable ear plugs, restricting the size of mineral fibres of ear plugs
	Sharp edges Pulls hair	Rounded edges and corners Eliminate elements which pull hair
	Contact with burning objects	Resistance to combustion and melting
	Contact with flame	Non-flammability, resistance to flame
Ageing of equipment	Exposure to weather, ambient conditions, cleaning, use	Resistance to industrial wear and tear Maintenance of characteristics throughout useful life

HAZARDS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	Wrong choice of equipment	Select equipment in line with nature and scale of hazards and industrial stresses:- - 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 hazard 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

Hazards	Origin and type of hazard	Safety and performance criteria for selection of equipment
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HAZARDS TO BE COVERED

Effects of dangerous substances in inhaled air	Particulate pollutants (dusts, 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 difficulties 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	Guaranteed oxygen supply through equipment
	Oxygen pressure	Respect oxygen capacity of equipment in relation to duration of use

HAZARDS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort:- - size	Ergonomic design:- - adaptability
	- bulk	- small bulk, good weight distribution
	- supply	- no interference with head movements
	- respiratory resistance	- respiratory resistance and high pressure in respiratory zone
	- microclimate in respirator	- respirators with breathing valves, blower
	- use	- easy to handle/use
Accidents and health hazards	Poor compatibility	Quality of materials
	Poor hygiene	Ease of maintenance and disinfection
	Not airtight (leaks)	Airtight fit to the face, imperviousness of equipment
	Accumulation of CO ₂ in inhaled air	Respirators with breathing valves, blower or CO ₂ absorbers
	Contact with naked flames, sparks, spatters of molten metal	Use of non-flammable materials
	Reduction of field of vision	Adequate range of field of vision
	Contamination	Resistance, ease of decontamination
Ageing of equipment	Exposure to weather, ambient conditions, cleaning, use	Resistance to industrial wear and tear Maintenance of characteristics throughout useful life

HAZARDS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	Wrong choice of equipment	<p>Select equipment in line with nature and scale of hazards and industrial stresses:-</p> <ul style="list-style-type: none"> - 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 <p>Select equipment to suit user's individual requirements (possibility of change)</p>
	Incorrect use of equipment	<p>Use equipment appropriately, be aware of hazard</p> <p>Follow information and instructions for use provided by manufacturer, safety organisations and test laboratories</p>
	Equipment dirty, worn or deteriorated	<p>Maintain in good condition</p> <p>Regular checks</p> <p>Respect maximum periods of use</p> <p>Replace in good time</p> <p>Follow manufacturer's instructions as safety rules</p>

5. PROTECTIVE GLOVES

Hazard	Origin and type of hazard	Safety and performance criteria for selection of equipment
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HAZARDS TO BE COVERED

General	Contact Use-related stress	Area of hand covered Resistance to tearing, stretching, abrasion
Mechanical	Abrasive sharp or pointed objects Impact	Resistance to penetration, puncture and cutting Padding
Thermal	Burning or cold materials, ambient temperature	Insulation against cold and heat
	Contact with flames	Non-flammability, resistance to flame
	Effects of welding work	Protection from and resistance to radiation and splashes of molten metal
Electrical	Electricity	Electrical insulation
Chemical	Action of chemicals	Imperviousness, resistance
Vibration	Mechanical vibration	Vibration reduction
Contamination	Contacts with radioactive materials	Imperviousness, ease of decontamination, resistance

HAZARDS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort	Ergonomic design:- - bulk - grading of sizes - surface area - comfort - permeability to water vapour
Accidents and health hazards	Poor compatibility Poor hygiene Gloves stick to the skin	Quality of materials Ease of maintenance Good shaping, design
Ageing of equipment	Exposure to weather, ambient conditions, cleaning, use	Resistance to industrial wear and tear Maintenance of characteristics throughout useful life Maintenance of size

HAZARDS ARISING FROM THE USE OF EQUIPMENT

Inadequate protection	Wrong choice of equipment	Select equipment in line with nature and scale of hazards and industrial stresses:- - 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 hazard Follow manufacturer's instructions
	Equipment dirty, worn or deteriorated	Maintain in good condition Regular checks Replace in good time Follow manufacturer's instructions

6. SAFETY BOOTS AND SHOES

Hazards	Origin and type of hazard	Safety and performance criteria for selection of equipment
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HAZARDS TO BE COVERED

Mechanical	Objects falling on or crushing the front of the foot	Resistance of the front of the boot or shoe
	Falls and impact on heel	Energy absorbing capacity of the heel Reinforcement of instep
	Falls as a result of slipping	Resistance to slipping of sole
	Treading on pointed or sharp objects	Puncture-proof sole
	Damage to:- - the malleoli - the metatarsus - the leg	Protection for:- - the malleoli - the metatarsus - the leg
Electrical	Low and medium voltage High voltage	Electrical insulation Electrical conductivity
Thermal	Cold, heat Molten metal spatter	Thermal insulation Resistance and imperviousness
Chemical	Harmful dusts or liquids	Resistance and imperviousness

HAZARDS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort:- - the shoe does not fit	Ergonomic design:- - shape, - padding, - shoe size
	- poor absorption of perspiration	- vapour permeability and water absorption capacity
	- fatigue from using the equipment	- flexibility, bulk
	- the shoe leaks	- waterproofing
Accidents and health hazards	Poor compatibility Poor hygiene Risk of dislocation and sprains because of poor foot holding	Quality of materials Ease of maintenance Stiffness across width of the shoe and arch support, fit
Ageing of equipment	Exposure to weather, ambient conditions, cleaning, use	Resistance to corrosion, abrasion and fatigue of the sole Resistance to industrial wear and tear Maintenance of characteristics throughout useful life
Static electricity	Discharge of static electricity	Electrical conductivity

HAZARDS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	Wrong choice of equipment	Select equipment in line with nature and scale of hazards and industrial stresses:- - 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 hazard 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

Hazards	Origin and type of hazard	Safety and performance criteria for selection of equipment
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HAZARDS TO BE COVERED

General	Contact Stress arising from use	Coverage of torso Resistance to tearing, stretching, prevention of spreading of tears
Mechanical	Abrasive, pointed and sharp objects	Resistance to penetration
Thermal	Burning or cold materials, ambient temperature	Insulation against cold and heat, maintenance of protective qualities
	Contact with flames	Non-flammability, resistance to flame
	Welding work	Protection from and resistance to radiation and splashes of molten metal
Electrical	Electricity	Electrical insulation
Chemical	Chemical damage	Impermeability and resistance to chemical damage
Humidity	Clothing leaks	Waterproofing
Non-visibility	Clothing difficult to see	Bright or reflective colour
Contamination	Contact with radioactive materials	Impermeability, ease of decontamination, resistance

HAZARDS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate comfort of user	Ergonomic design:- - size - grading of sizes - surface area - comfort - permeability to water vapour
Accidents and health hazards	Poor compatibility Poor hygiene Clothing sticks to the skin	Quality of materials Ease of maintenance Good shaping, design
Ageing of equipment	Exposure to weather, ambient conditions, cleaning, use	Resistance to industrial wear and tear Maintenance of characteristics throughout useful life Maintenance of size

HAZARDS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	Wrong choice of equipment	Select equipment in line with nature and scale of hazards and industrial stresses:- - 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 hazard Follow manufacturer's instructions
	Equipment dirty, worn or deteriorated	Maintain in good condition Regular checks Replace in good time Follow manufacturer's instructions

8. LIFE JACKETS FOR INDUSTRIAL USE

Hazard	Origin of hazard	Safety and performance criteria for selection of equipment
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HAZARDS TO BE COVERED

Drowning	Fall into water of a person in work clothing, unconscious or deprived of physical faculties	Buoyancy Righting ability even if wearer is unconscious Inflation time Triggering of automatic inflation Ability to keep mouth and nose out of the water
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HAZARDS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Constraint caused by inappropriate size or poor design	Ergonomic design which does not restrict vision, respiration or movement
Accidents and health hazards	Jacket falls off if wearer falls into water	Design of life jacket (stays in position)
	Damage to jacket during use	Resistance to mechanical damage (impact, crushing, perforation)
	Function of inflation system affected	Maintenance of safety qualities under all conditions Type of gas used for inflation (size of container, whether or not gas is harmful) Efficiency of automatic inflation device (also after long storage) Possibility of triggering inflation manually Provision of a device for oral inflation even while jacket is worn
	Inappropriate use	Outline instructions for use marked on jacket indelibly

Ageing of equipment	Exposure to , ambient conditions, cleaning, use	Resistance to chemical, biological and physical attack:- <ul style="list-style-type: none">- seawater- detergents- hydrocarbons- micro-organisms (bacteria, mould) Resistance to climatic factors:- <ul style="list-style-type: none">- thermal stress- humidity- rain- splashing- solar radiation Resistance of materials and protective covers:- <ul style="list-style-type: none">- tearing- abrasion- non-flammability- spattering of molten metal (welding)
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HAZARDS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	Wrong choice of equipment	Select equipment in line with nature and scale of hazards and industrial stresses:- - 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 hazard 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

Hazard	Origin of hazard	Safety and performance criteria for selection of equipment
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HAZARDS TO BE COVERED

Impact	Falls from a height Loss of balance	Resistance and suitability of equipment and anchorage point
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HAZARDS ARISING FROM THE EQUIPMENT

Discomfort, interference with work	Inadequate ergonomic design	Ergonomic design:- - method of construction - bulk - flexibility - ease of putting on
	Restriction of freedom of movement	Gripping device with automatic length adjustment
Accidents and health hazards	Dynamic stress exerted on the user and equipment during braking	Suitability of equipment:- - distribution of braking stress to parts of the body with absorption capacity - reduction of braking force - braking distance - position of attaching device
	Oscillation and lateral impact	Anchorage point above the head, anchorage at other points
	Static stress exerted on suspended body by straps	Design of equipment (distribution of stress)
	Slipping of link device	Short link device (e.g. safety harness, espacement line)
Ageing of equipment	Change in mechanical resistance resulting from exposure to weather, ambient conditions, cleaning and use	Resistance to corrosion Resistance to industrial wear and tear Maintenance of characteristics throughout useful life

HAZARDS ARISING FROM THE USE OF THE EQUIPMENT

Inadequate protection	Wrong choice of equipment	Select equipment in line with nature and scale of hazards and industrial stresses - 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 hazard Follow manufacturer's instructions
	Equipment dirty, worn or deteriorated	Maintain in good condition Regular checks Replace in good time Follow manufacturer's instructions

Dated this 18th day of July 2002.

By the Administrator's Command,
D.J. BONNER,
Chief Officer,
Sovereign Base Areas.

(107/6)
