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**TITLE:** Personal Protective Equipment

**STANDARD:** 207

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### **Definitions (in relation to this Standard)**

Competent                      Trained, experienced and qualified

### **Cross-References**

- Standard 205 – General Safe Working Practices
- Standard 204 – Planning & Preparedness
- Appendix 1 – Royal Commission Hand Protection policy

### **Policy**

1. The minimum requirements for the wearing of Personal Protective Equipment (PPE) on all constructions sites by all persons, including visitors and suppliers, shall be:
  - Safety Helmet
  - Safety Footwear
  - Eye Protection
  - High Visibility Vest(with reflective strips) ( EN 471, ANSI 107-2010 etc.)
  - Suitably rated gloves

### **Standard**

#### **General**

2. PPE shall be selected and provided by the Contractor, and used to provide protection for all personnel, including visitors against the following hazards:
  - General construction safety
  - Mechanical injury
  - Inhalation and respiratory tract
  - Skin contact
  - Chemical, biological & radiation
  - Environmental

All PPE is to conform to internationally recognized standards (such as ANSI, EN, B.S.), and be clearly marked/stamped as such.

3. All employees shall be provided with the necessary PPE as identified in the risk assessment for the particular work activity. Contractor is to ensure compatibility between different types of PPE when more than one is to be worn at the same time (i.e. eye and hearing protection).

## Personal Protective Equipment (PPE)

4. Contractor shall provide the required PPE and the necessary information and instruction relating to the effective use of the equipment.
5. All employees shall be held responsible for the proper care and use of any PPE supplied to them.
6. Contractor shall replace free of charge to the employee, any PPE that becomes defective.
7. Supervisors shall be held responsible for ensuring that all employees are trained in the use of, are provided with, and are wearing PPE required for the work activity.
8. Employees not wearing, or refusing to wear PPE issued to them shall not be allowed to work, and Supervisors shall apply disciplinary action against the individual.
9. Contractor shall provide adequate and sufficient facilities for the storage of all PPE by employees when not in use.
10. All PPE shall be inspected by the User prior to each use, and Respiratory Protective Equipment (RPE) formally by the Supervisor on a weekly basis; records to be kept and made available to the Royal Commission on request.

### Clothing

11. Every employee shall wear clothing that protects the body and extremities; trousers, and shirts that comply with Standard 205 – General Safe Working Practices. The wearing of short trousers is prohibited.
12. Loose clothing shall not be worn where it can contact or catch on energized circuits, moving mechanical parts, equipments or other hazards of this type.
13. Rings and necklaces should be removed where there is a danger of catching them on moving parts of machinery.
14. Specific and adequate body protection must be supplied for all work activities which present certain hazards to personnel, including but not limited to:
  - working in extremes of temperature (furnaces, refrigeration etc...)
  - sandblasting
  - welding
  - handling, mixing of acids and other toxic, corrosive chemicals
  - clearing up of hazardous waste (asbestos, lead, hydrocarbons etc...)

### Head Protection

15. Safety Helmets, Hard Hats or "bump caps" must be manufactured in accordance with a recognized international standard (i.e. EN 397, ANSI Z89.1 etc...).
16. Head protection must be worn at all times whilst on a construction site, with the following exceptions:

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Construction ES&H Manual

## Personal Protective Equipment (PPE)

- welders, when cutting or welding in restricted spaces that make the wearing of a safety helmet impracticable
  - construction plant and vehicle operators whilst operating from an enclosed cab that offers fall/rollover protection
  - office workers
  - Surveyors whilst working with a theodolite
  - during lunch and break periods in a welfare area, provided that no work is in progress in the immediate area
17. Head protection must be worn in accordance with manufacturer requirements. The practice of wearing the hat backwards (visor to the rear) is prohibited. Head protection must be worn directly on the head to ensure proper function; the wearing of baseball caps or other headgear underneath the head protection shall be prohibited.
18. Painting of head protection shall be prohibited.
19. ES&H staff or supervisors with ES&H responsibilities shall wear red-colored head protection for easy identification.
20. Supervisors shall wear yellow-colored head protection for easy identification.
21. Hard hat shall be changed as per manufacturer's recommendation or when it is damaged.

## Eye and Face Protection

22. Eye Protection must be manufactured in accordance with a recognized international standard:
- |                             |                                 |
|-----------------------------|---------------------------------|
| ▪ Safety glasses or goggles | ANSI Z87, EN 166 etc...         |
| ▪ Full face masks           | ANSI Z87, EN 166 etc...         |
| ▪ Sunglasses                | ANSI Z80.3, EN 1836 etc...      |
| ▪ Welding goggles           | ANSI Z87, EN 1542 etc...        |
| ▪ Welding masks             | ANSI Z49, EN 175, EN 169 etc... |
23. Safety glasses are required at all times on construction sites, with the following exceptions:
- When the task requires the use of other eye protection, such as full face mask, SCBA, goggles or mask
  - office workers
  - during lunch and break periods in welfare areas, provided that no work is in progress in the immediate area
24. During daylight, Safety glasses should be tinted (i.e. dark safety with UV protection). With clear safety glasses worn indoors and at night time.
25. Employees whose vision requires the use of corrective lenses shall wear one of the following:
- personal eye glasses whose protective lenses provide optical correction and conform to the requirements of safety glasses requirements

## Personal Protective Equipment (PPE)

- safety goggles over their personal eye glasses
- "clip-on" safety over-glasses

26. Safety Goggles shall be worn for the following work activities:

- Work involving rotating equipment such as grinders, drills, lathes
- Chipping, chiseling and caulking
- Using cartridge-operated tools
- Using, mixing or working with chemicals, acids, disinfectants, pesticides or other toxic and hazardous fluids
- All other materials where a material safety data sheet requires the use

27. For all welding operations, whether arc, gas, MIG, TIG or powered otherwise, Welders must use a full welder's mask or welders shield manufactured in accordance with Serial 22.

28. For all cutting, brazing and soldering operations, Welders must use welder's goggles as a minimum, manufactured in accordance with Serial 22.

29. Welder's assistants are to use the same type and standard of PPE as the welder.

30. Certain welding operations require special types of protection, including in some cases, double protection. In any such instances, recognized international standards must be rigidly followed for selection of the correct lens shades.

31. Full face masks and safety glass should be worn for all grinding operations (see Figure 1)



Figure 1 – Full face mask

## Safety Footwear

32. All Safety Footwear must have steel toe-cap insert.

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## Personal Protective Equipment (PPE)

33. Safety Footwear must be manufactured in accordance with a recognized international standard (i.e. EN 345, ANSI Z41, ASTM F2412-05 etc...).
34. Safety Footwear must be worn at all times whilst on a construction site, with the exception of when it has been identified by risk assessment that it is more practicable to wear Wellington boots (i.e. concreting operations, working in water etc...).
35. Electricians must be supplied with Safety Footwear specifically for their trade, manufactured to a recognized international standard (i.e. EN 347, ANSI Z41 etc...).
36. Safety Footwear shall be changed by the contractor, when it is damaged and when it will not be able to give the intended protection anymore.

## Respiratory Protection

37. Respiratory Protective Equipment (RPE) shall be made available to all persons who are exposed to any situation in which there is a possibility of the atmosphere being, or becoming deficient in oxygen, or containing any harmful substance in gaseous, particle, dust, mist or vapor form, including, but not limited to:
  - Work in containers or vessels
  - Shafts, sewers, or enclosed septic tanks
  - Refrigeration plants
  - Sand-blasting operations
  - Spray-painting operations
  - Diving operations
38. RPE will be selected on the basis of hazards to which the employee will be exposed. Protection will be selected following a risk assessment of the work to be performed and based on the information provided on the Material Safety Data Sheet (MSDS) associated with the substance to be used. Specific standards for the RPE identified by the MSDS are to be met.
39. RPE will be used, stored and maintained in accordance with the manufacturer's instructions.

## Hearing Protection

40. Suitable hearing protection must be made available to all persons exposed to noise levels of 85 dB (A) or above. As a general guide, 85 dB(A) is when you have to raise your voice standing 1m away from another person to be heard.
41. When areas have been identified that meet the above criteria, Contractor must conduct a noise level survey and risk assessment for that area using a calibrated noise/sound level meter; records to be kept and made available to the Royal Commission on request.

## Personal Protective Equipment (PPE)

42. Wearing of hearing protection is mandatory where the noise level meets or exceeds the following established limits:

Time spent in Area (hours/day)	Noise level (dB[A])
12	87
10	88
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4	115

43. Areas of 85 dB (A) or higher must have adequate hazard warning signage indicating the hearing protection requirements.
44. Hearing Protection worn frequently by an individual shall be issued on a personal basis and shall be of the "muff / defender" type. It is the Contractor's responsibility to ensure the hearing protection issued is of the correct type giving the sufficient amount of protection.
45. Suitable disposable hearing protection must be supplied by the entrance to all high-noise level areas of 85 dB (A) and above for visitors etc...

### Hand and Arm Protection

46. Adequate hand and/or arm protection must be made available for all manual labor. The type of protection worn shall be selected according to the hazard to be protected against and/or the MSDS relevant to the substances to be used (Contractors must use the attached Royal Commission Appendix 1, *Glove Selection Matrix* to determine suitable gloves). These include, but not limited to:

- Impacts, cuts, abrasions and infections
- Extreme temperatures
- Chemical, toxic, corrosive and other hazardous substances
- vibration

47. All contractors are to develop and implement a specific written *Hand Protection Policy & Procedure*. This should be site specific and include, (but not limited to):

- Training .
- Known and foreseeable hazards.
- Glove selection using matrix.
- Glove care.
- Hand and power tool selection and use.
- Effects of heat and cold stress on hands.
- Enforcement policy.

## Personal Protective Equipment (PPE)

48. Contractor glove selection & Hand Protection Policy must comply with the Royal Commissions Hand Protection Policy (Appendix 2).

### Specialized Protection

#### Electrical

49. If the work involves, the appropriate Work Plans and Safe Method Statements or Safe Sequences of Work have been approved, and SEC permits have been issued, Electrical Protection Equipment shall be worn appropriate for the voltage to be encountered when:
- working on lines, unless they have been de-energized and grounded;
  - when changing or moving ground wires or neutrals on energized equipment;
  - when working within 6 feet (2m) of exposed energized lines or exposed live parts;
  - or whenever Royal Commission deems necessary.
50. Only competent and highly trained persons are to be used for such activities.
51. Manufacturer's classification shall be clearly marked on all electrical protection equipment.
52. All electrically insulating equipment shall be inspected for damage on each use, and shall be tested on an annual basis.

#### Water

53. Personal flotation device (life jacket/preserver/vest/saver) must be worn by all personnel when working from a boat, raft, partially constructed berths and piers, above, adjacent to, or near open water where there is a hazard of falling in, or in any place where the danger of drowning exists, including, but not limited to cooling tower basins.
54. Persons working on barges, pier legs or accesses to berths or piers that have handrails conforming to Standard 216 – Working Platforms, are not required to wear a personal flotation device.

### Working at Height

55. Standard 218 – Fall Arrest & Work Restraint Systems details the requirements of harnesses and associated equipments.

## Personal Protective Equipment (PPE)

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