PERSONAL PROTECTIVE EQUIPMENT (PPE) PROGRAM

Statement of Purpose and Responsibilities (Part 8 and Part 7 of the OH&S Regulation)

It is the employer's responsibility to determine what protective equipment will be used for specific hazards. Supervisors are responsible for making equipment available and for its sanitation and maintenance. It is also the supervisor's responsibility to train each worker in its use and care, and to enforce regulations regarding its wearing or use. Where workers provide their own equipment, the supervisor shall be responsible for its adequacy including proper selection, maintenance, use, and sanitation of such equipment. A recommended policy is the "100 percent plan" under which all persons in designated hazardous areas (including supervisors and visitors) are required to wear all appropriate protective equipment.

Prior to using any type of Personal Protective Equipment, ensure it is in good shape, free of dirt and debris and that you are familiar with its correct use. Workers must ensure that all protective equipment fits properly and that it is free from damage. This will require that workers inspect their PPE prior to each use.

Personal protective equipment must always be stored with care to prevent damage. Refer to manufacturer's instructions for proper care and storage. The following points outline specific requirements for PPE;

SAFE WORK CLOTHING

Proper fit is important, since loose-fitting clothing may get caught in machine parts or on protruding objects.
Shirts that are long-sleeved shall be worn whenever possible. Work pants and shirts should not have cuffs or pockets if worn near welding or cutting operations, since slag can get caught in them.

Fabrics such as cotton or wool should be selected for use around welding, torches, portable heaters, etc.
Synthetics shall be avoided entirely since they may melt or burn rapidly if exposed to high heat.
Clothing which is saturated by oil, fuel, or a flammable solvent can easily ignite and should not be worn.

Jewellery should not be worn on site. Rings, bracelets, wristwatches, and neck chains are dangerous near electrical equipment, machinery, jagged edges, and protruding objects.

Temperature Stresses

Heat, cold, and rain place stress on the body. These effects are compounded by heavy work.
The combined effect of these stresses can lead to life-threatening situations such as the development of hypothermia (loss of body heat), heat exhaustion, and heat stroke. If necessary, workers shall be instructed in the proper attire for heat, cold, and rain.

HEAD PROTECTION (Part 8.11 of the OH&S Regulation)

- All workers shall wear, at all times on the job, a CSA approved safety hardhat.
- Workers must wear non-conductive safety headgear when exposed to electrical hazards.
- Never paint your hardhat and never wear a painted hardhat The shell and suspension of hardhats must be inspected regularly for cracks, deep scratches or other defects.
- Replace a defective hardhat immediately.
- The replacement of headgear every 5 years and headgear suspension every year is highly recommended.

FOOT PROTECTION (Part 8.22 of the OH&S Regulation)

- At all times on the job, workers must wear CSA certified Grade 1 footwear.
  This footwear bears a green triangular patch stamped with the CSA trademark on the outside and rectangular green label on the inside.
- Safety footwear should always be worn with the laces tied up at the top of the footwear.
- Do Not wear safety footwear that is cracked or has cuts through the leather. Always make sure the footwear has good slip resistant sole material that is not excessively worn.

HAND PROTECTION (Part 8.19 of the OH&S Regulation)

In most cases, general duty gloves made from leather, cotton, and/or fabrics provide adequate protection against hand injuries. They allow considerable dexterity while shielding the hands from minor cuts, splinters, abrasions, and dirt. Some gloves provide a snug closure around the wrist, while other gloves extend protection to the forearm.

For work in wet areas, rubber or vinyl gloves are recommended. Insulated gloves and work-glove liners are available for cold weather work. Welding and cutting shall only be done with flame-resistant gauntlet gloves.
In addition to gloves, many types of "sleeves" are available to protect the workers arms from cuts, scrapes, and burns as well.

SKIN PROTECTION (Part 8.19 to 8.21 of the OH&S Regulation)

- Workers are encouraged to always dress suitable for work. Items such as denim coveralls and cotton shirts provide protection against minor scrapes and bruises as well as harmful ultraviolet radiation.
- The following is the minimum recommended requirements for personal protection;
  - for personal safety on the job, Do Not wear loose clothing or cuffs, greasy or oily clothing, gloves or boots – torn or ragged clothing – finger rings.
  - Neck chains are hazardous and must be worn under clothing so that they don't hang out. Long hair must be tied back or otherwise confined.
  - Clothing made of synthetic fibers can be readily ignited and melted by electric flash. Cotton or wool fabrics are more flame retardant and are therefore recommended.
- Workers must at all times wear a shirt with a four inch sleeve in order to protect themselves from sunburn and abrasion.
- Long pants and long sleeved shirts are recommended for use to reduce minor cuts, scrapes and abrasions and should be worn when working with sharp or abrasive materials.
- Gloves should NOT BE WORN when operating powered tools such as drills, saws, table saws, etc.
- Workers should wear protective equipment when handling materials likely to puncture, abrade or irritate hands and arms, unless the use of this equipment introduces equal or
  greater hazards.

EYE PROTECTION (Part 8.14 – 8.18 of the OH&S Regulation)

The need for eye and face protection changes from moment to moment on the job site.

Certain activities, such as welding, cutting, using abrasive wheels or paving breakers, demand the use of specific protective devices. In other operations which may produce flying dust, sparks, or sprays, Scaffold Depot must determine the potential for preventable injury and establish requirements on that basis. Scaffold Depot shall make eye and face protection available and require their use by workers exposed to eye and face hazards.

Eye and face protective devices consist of safety glasses, goggles, face shields, welding goggles, and welding helmets. Safety glasses and goggles are designed to protect the eyes from dust, flying particles, sparks, and splashing liquids. Face shields provide additional protection from the same hazards and shall only be worn over safety glasses or goggles. Welding goggles and helmets must be used by all workers engaged in welding and by all workers assisting in these activities.

Eye and face protectors must provide adequate protection against the hazards for which they are used. The only protectors that may be used are those which conform to WCB regulations for impact resistance, heat deformation, flammability and durability.

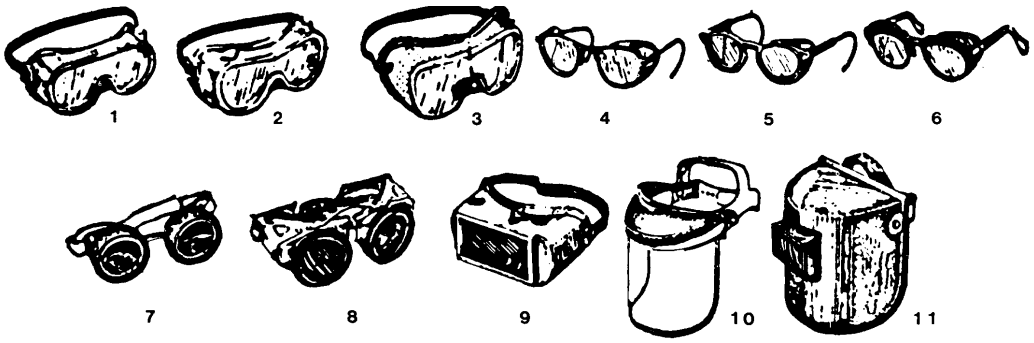
These regulations are found in the Occupational Health and Safety Regulation, Section 8.14-8.18 EYE and FACE PROTECTION. Safety eyewear shall meet the requirement of CSA Standard CAN/CSA-Z94.3-92, Industrial Eye and Face Protectors or ANSI Standard Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.

Workers must ensure that their glasses, goggles and shields are kept clean and in good repair. Lenses and other clear pans shall be kept free from fog, pits or scratches. Lenses which are badly pitted, scratched or cracked or have lost some of their impact resistance, shall be replaced. Fogging can be reduced or eliminated by using special fog proof goggles or a fog-proof cleaning compound. Defective support pieces, such as frames, straps or helmets shall be replaced.

Eye protection must fit snugly and comfortably without interfering with the worker's movement or vision. Workers are more inclined to wear protective devices "full time" when they fit properly and comfortably.

Workers who wear prescription glasses must wear corrective lenses that conform to impact resistance requirements of ANSI Z-87, or CSA Standard CAN/CSA-Z94.3-92. They may wear goggles or welding helmets that fit over their prescription glasses. Contact lenses fail to provide any protection against dust or flying particles, therefore, safety goggles must be worn over contact lenses when hazards are present.

- Where the possibility of injury to the eyes exists, workers shall wear appropriate eye protection. As a basic requirement, workers are advised to always wear safety glasses with side shields.
- Workers must wear safety goggles over non-safety prescription glasses where an eye hazard exists.
- Workers engaged in the operation of sanders and grinders must wear safety glasses with side shields as well as face shields.
- Workers using chemical products, which may splash into the eyes shall wear safety goggles or chemical splash goggles dependent upon the requirements of the Material Safety Data Sheet for the product. The use of strong chemical products such as acids, base or alkaline products will require the use of a face shield as well as chemical goggles.
- Workers wearing contact lenses must inform their supervisor so that the lenses can be removed in the event of an accident.
- Workers must not wear contact lenses where gases, vapours, flying objects, dust or other materials are present that may harm the eyes or be absorbed by the lenses.



Types of Eye Protection

1. GOGGLES, Flexible Fitting, Regular Ventilation
2. GOGGLES, Flexible Fitting, Hooded ventilation
3. GOGGLES, Cushioned Fitting, Rigid Body
4. SPECTACLES, Metal Frame, with Sideshields
5. SPECTACLES, Plastic Frame. with Sideshields
6. SPECTACLES , Metal-Plastic Frame. with Sideshields
7. WELDING GOGGLES, Eyecup Type, Tinted Lenses (Illustrated)

7a. CHIPPING GOGGLES, Eyecup Type, Clear Safety Lenses (Not Illustrated)

8. WELDING GOGGLES, Coverspec Type, Tinted Lenses (Illustrated)

8b. CHIPPING GOGGLES, Coverspec Type, Clear Safety Lenses (Not Illustrated)

9. WELDING GOGGLES, Coverspec Type, Tinted Plate Lens

10. FACE SHIELD, (Available with Plastic or Mesh window)

11. WELDING HELMETS

APPLICATIONS		
OPERATION	**HAZARDS**	**RECOMMENDED PROTECTORS**
ACETYLENE-BURNING ACETYLENE-CUTTING ACETYLENE-WELDING	SPARKS, HARMFUL RAYS, FLYING PARTICLES	7,8,9
CHEMICAL HANDLING	SPLASH, ACID BURNS, FUMES	2,10 (for severe exposure add 10 over 2)
CHIPPING	FLYING PARTICLES	1,3,4,5,6,7a,8a
ELECTRICAL (ARC) WELDING	SPARKS, INTENSE RAYS, MOLTEN METAL	9,11 (11 in combination with 4,5,6 in tinted lenses advisable)
FURNACE OPERATIONS	GLARE, HEAT, MOLTEN METAL	7,8,9 (for severe exposure add 10)
GRINDING-LIGHT	FLYING PARTICLES	1,3,4,5,6,10
GRINDING-HEAVY	FLYING PARTICLES	1,3,7a,8a (for severe exposure add 10)
LABORATORY	CHEMICAL SPLASH, GLASS BREAKAGE	2 (10 when in combination with 4,5,6)
MACHINING	FLYING PARTICLES	1,3,4,5,6,10
MOLTEN METALS	HEAT, GLARE, SPARKS, SPLASH	7,8 (10 in combination with 4,5,6 in tinted lenses)
SPOT WELDING	FLYING PARTICLES	1,3,4,5,6,10

HEARING PROTECTION (Part 7.7(1)(c)(d) of the OH&S Regulation)

Day to day exposure to loud noises can result in a permanent loss of hearing. An effective health and safety program takes positive steps to eliminate this problem. Damage to hearing occurs when a person is exposed to excessive noise levels.

Often, significant noise reduction is very difficult to attain. In those instances some form of personal protective equipment must be provided, such as ear muffs, disposable fiber or foam plugs, or reusable rubber plugs. Cotton provides little, if any, hearing protection and should not be part of any hearing conservation program.

Workers must be trained in the proper use and fitting of ear plugs, as the effectiveness of a plug depends primarily on how well it is fitted. Personal hygiene should be stressed, as dirt in the ear or on the plugs can lead to infection. It shall be pointed out to workers who use hearing protection equipment that while wearing the equipment, their hearing is somewhat reduced, and they may have difficulty hearing other workers backup alarms, and other important noises.

Audiograms should be part of the worker's pre-employment physical to determine if hearing loss is pre-existing. Annual audiograms will also allow the employer to verify the effectiveness of their hearing loss protection program.

The following points are the minimum standard to be achieved by trained workers;

- All workers engaged in Construction work are required to have an annual hearing test and are required to carry a current hearing test card.
- Workers engaged in activities, which generate noise, or who are exposed to noise from tools and equipment shall wear CSA approved hearing protection.
- Prolonged exposure to noise levels in excess of 90db is harmful. Examples of noise levels associated with the Construction Industry include;
    - Crane operator82 – 99 db
    - Drilling99 – 103 db
    - Welding84 – 97 db
    - Air arc cutting120 db
    - Pneumatic hammer100 db

- Always keep your hearing protection clean to avoid irritation to the ear and ear canal.

RESPIRATORY PROTECTION (Part 8.32 to 8.45 of the OH&S Regulation)

The use of respirators is required whenever entering an area in which the concentration of airborne contaminants exceeds permissible exposure limit (PEL) standards. Supplied air breathing devices may also be necessary when workers enter areas deficient in oxygen. Exposure of workers to these hazardous atmospheres must be avoided whenever possible through engineering or administrative controls. Engineering controls, such as ventilation and spraying dusty areas with water, can often reduce the level of contaminants to the point where a respirator is no longer needed. Similarly, administrative controls, such as changing work procedures or schedules to eliminate exposure to hazardous atmospheres, shall be used whenever possible.

The use of a respirator does not necessarily ensure breathing clean air. It is essential that the proper respirator be selected, that it work consistently and properly, and that it is maintained, cleaned, and stored in the correct manner. For these reasons, each employer whose workers use respirators must develop a respiratory protection program. The program shall be administered by a suitably trained administrator and must include written operating procedures that provide direction for the selection, fitting, use, maintenance, and storage of respirators. The necessary components of an effective respiratory protection program shall include:

- Procedures for selecting respirators
- Medical evaluation of workers who use respirators
- Fit testing procedures for tight fining respirator
- Procedures for proper use of respirators
- Procedures and schedules for maintaining respirators
- Procedures to ensure adequate air quality, quantity and flow of breathing air for supplied air respirators
- Training of workers in the respiratory hazards which they are potentially exposed
- Training of workers in the proper use of respirators
- Procedures for regularly evaluating the effectiveness of the respiratory protection program.

The use of respiratory equipment is only is only permitted by trained personal. Please refer to the Respiratory Protection Program for more information on the safe use of respirators.

The following points are the minimum standard to be achieved by trained workers;

- Construction workers are sometimes exposed to respiratory hazards generated by equipment, materials, or procedures. When this occurs, workers shall wear appropriate respiratory protection bases on the hazard, the product, or the requirements of a Material Safety Data Sheet (MSDS).
- Respiratory protective devices range from disposable dust and vapour masks, through twin cartridge half mask respirators, to air supplied respirators and Self Contained Breathing Apparatus (SCBA).
- Workers required to wear respirators must be clean shaven in the areas where the respirator contacts the skin.
- Only workers who have been adequately instructed shall wear respirators. Half mask, full mask and air supplied respirators require that the wearer be fit tested to the respirator to be worn.
- No worker shall use these types of respirator until they have been successfully fit tested. Workers shall only use the respirator they were fit tested to unless a new fit test is performed, shall not use a substitute respirator.
- Respirators, other that disposable types, shall be stored in a clean, dry area, preferably in a plastic bag. Damaged respirators shall not be used until they are repaired or replaced.

MACHINE AND TOOL GUARDS (Part 12.2(b),(c) of the OH&S Regulation)

Employees, who are responsible for placing equipment into service, are also responsible to ensure that equipment guards are in place. If, due to damage or deterioration, the original guard provided on a piece of equipment cannot be put in place, employees should use a temporary method, offering equal or better protection than that required by the manufacturer and OH&S.

Some examples of tools requiring guards are;

- Table saws
- Circular saws.
- Grinders.
- Compressors where the pump and the compressor are connected via a belt.

All tools which have a guard on them by design must ensure that guard is in place and that it is working effectively. Under no circumstances is a worker permitted to remove a guard from a tool unless it is to affix another piece of equipment. For example a shroud assembly is required when attaching a vacuum to a grinder for the purposes of finishing cement. In this case the guard must be removed in order to attach the shroud.