

SAFE WORK



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Eye and Face Protection

Potential hazard:

Workers exposed to hazards such as flying objects and particles, splashing liquids, molten metal, and various types of radiation may be at risk of serious face or eye injuries.

How to control the hazard:

Eye and face injuries can be prevented by:

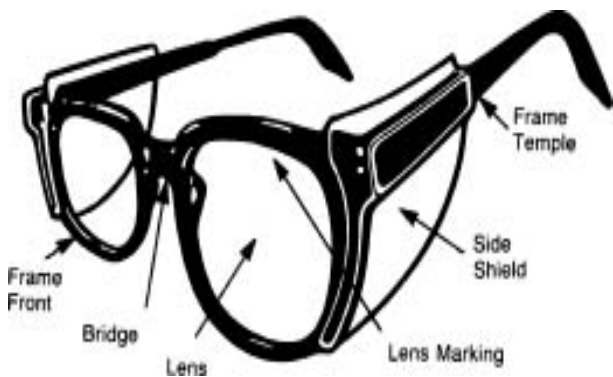
- Eliminating or controlling the hazard at its source through the use of **engineering controls**
- Using approved **personal protective equipment (PPE)**

Using these control methods together provides maximum worker protection.

Engineering Controls:

Employers must first try to eliminate or control the hazard at its source with engineering controls. For example, placing protective housing around laser sources to prevent laser beams from reaching workers' eyes.

Personal protective equipment (PPE):



When a hazard to the eyes or face cannot be eliminated by the use of engineering controls, suitable PPE must be worn according to the type of work being done (see table on pg2).

What you need to know:

- The chosen eye or face protector must meet the requirements of the Canadian Standards Association standards CSA - Z94.3 "Eye and Face Protectors" and CSA-Z94.3.1 "Protective Eyewear: A User's Guide".
- Prescription glasses with glass lenses do **not** meet the impact requirements under CSA-Z94.3.1.
- Eyewear with prescription lenses other than glass must:
 - have lenses with a minimum thickness of 3.0 mm (1/8"), unless they are manufactured to meet the requirements of the standard.
 - have lenses that meet the size requirements specified in the standard
 - be equipped with permanently attached or removable side shields.
- Approved eye protection must be worn over prescription glasses that do not meet the above requirements.
- Contact lenses are **not** a substitute for proper eye and face protection.
- Eye and face protectors must be available in a range of eye, bridge and temple sizes to meet the needs of individual workers.
- Employers must provide approved emergency eyewash facilities at any workplace where there is a risk of eye injury from exposure to hazardous chemical substances (See Safe Work Bulletin #104).

- **Reference to legal requirements under workplace safety and health legislation:**
 - Personal Protective Equipment: Manitoba Regulation 217/2006 Part 6
- **Additional workplace safety and health information available at: www.safemanitoba.com**
 - SAFE Work Bulletin #104: Emergency Eyewash Equipment
 - CSA Standard Z94.3, *Eye and Face Protectors*
 - CSA Standard Z94.3.1, *Protective Eyewear: A User's Guide*

Workplace Safety and Health Division Contact Information:

Winnipeg: (204) 945-3446
Toll-Free: 1-800-282-8069 ext. 3446 (Manitoba only)
24-Hour Emergency Line: (204) 945-0581

Publications/resources available at: www.safemanitoba.com



CLASSIFICATION OF HAZARDS AND RECOMMENDED PROTECTORS

Hazard groups	Nature of hazard	Hazardous activities involving but not limited to	Spectacles Class 1		Goggles Class 2			Welding helmet Class 3	Welding hand shield Class 4	Face shields Class 6			Non-rigid hoods Class 5			
			A	B	A	B	C			A	B	C	A	B	C	D
A	Flying objects	Chipping, scaling, stonework, drilling; grinding, buffing, polishing, etc; hammer mills, crushing; heavy sawing, planing; wire and strip handling; hammering, unpacking, nailing; punch press, lathe work, etc	X		X	X				X			X	X		
B	Flying particles, dust, wind, etc	Woodworking, sanding; light metal working and machining; exposure to dust and wind; resistance welding (no radiation exposure); sand, cement, aggregate handling; painting; concrete work, plastering; material batching and mixing	X		X	X				X			X	X		
C	Heat, sparks, and splash from molten materials	Babbiting, casting, pouring molten metal; brazing, soldering; spot welding, stud welding; hot dipping operations		X			X				X	X			X	X
D	Acid splash; chemical burns	Acid and alkali handling; degreasing, pickling and plating operations; glass breakage; chemical spray; liquid bitumen handling				X				X				X		
E	Abrasive blasting materials	Sand blasting; shot blasting; shotcreting				X				X				X		
F	Glare, stray light (where reduction of visible radiation is required)	Reflection, bright sun and lights; reflected welding flash; photographic copying	X		X	X				X			X	X		
G	Injurious optical radiation (where moderate reduction of optical radiation is required)	Torch cutting, welding, brazing, furnace work; metal pouring, spot welding, photographic copying		X			X				X				X	
H	Injurious optical radiation (where large reduction of optical radiation is required)	Electric arc welding; heavy gas cutting; plasma spraying and cutting; inert gas shielded arc welding; atomic hydrogen welding														

Chart based on Canadian Standards Institute Z94.3.1 Industrial Eye and Face Protectors, Appendix A.
 This table cannot encompass all of the various hazards that may be encountered. In each particular situation, thorough consideration should be given to the severity of all the hazards in selecting the appropriate protector or combination of protectors..

Note: Highlighted areas are recommendations for protectors. Class 1 and Class 2 protectors shall be used in conjunction with recommendations for Classes 3, 4, 5, and 6 protectors. The possibility of multiple and simultaneous exposures to a variety of hazards shall be considered in assessing the needed protection. Adequate protection against the highest level of each of the hazards should be provided. [This table cannot encompass all the various hazards that may be encountered. In each particular situation, thorough consideration should be given to the severity of all the hazards when selecting the appropriate protector or combination of protectors.] The practice of wearing protective spectacles (Class 1 B) with filter lenses under welding helmets or hand shields is strongly recommended, to ensure impact and flash protection to the wearer when the helmet or lift front is raised or the shield is not in use. Protectors that meet the requirements for ignition and flame resistance are not intended to provide protection in environments that expose the user to open flame or high-energy arcs.