

Personal Protective Equipment – Head Protection Hazard Assessment

This assessment will help determine:

1. If head protection is required at your workplace.
2. The type, class and other considerations for head protection.

Please Note:

- A hazard assessment should be conducted and documented by a qualified person.
- This assessment does not replace the manufacturer’s instructions. Certain types of work activity or specific equipment may direct the type of head protection required.
- This assessment does not include fire fighting head protection. To determine the most appropriate head protection for use in fire fighting, consult the NFPA 1972 Standard for helmets for structural fire fighting.

Hazard Assessment

Step 1: Determine if head protection is required

To determine if head protection is required in your workplace, information should be gathered by:

- Reviewing procedures and tasks to determine if there are hazards that can contribute to a head injury.
- Observing the people working to determine the existence of unsafe or potentially unsafe conditions.
- Conducting interviews with employees to determine the nature of any hazards and their location.
- Reviewing accident/ incident reports, JHSC minutes to understand the types of accidents/incidents and safety concerns applicable to the workplace and to determine the workplace locations where safety issues may arise.

During the information gathering process, answer the following questions.

Do employees work:

	YES	NO
a) Under objects that may fall from above and strike employees in the head?		
b) Below other employees who use tools and materials that could fall?		
c) Around or under conveyor belts that carry parts or materials that could fall?		
d) Below machinery or processes that might cause material or objects to fall?		
e) Around flying objects that could strike employees in the head?		
f) Around low clearances that could expose employees to head injuries?		
g) Near exposed beams, machine parts, pipes, etc.?		
h) With or near exposed electrical hazards, electrical wiring or components?		
i) On a project site, in an industrial setting, in a mine, with utilities or in forestry?		
j) In an environment where objects are moving at the head level or above?		
k) In areas where they may strike their heads against fixed objects, like supports, beams, or other equipment?		

- **If you answered no to all the questions above**, employees do not require protective headwear and the assessment ends here.
- **If you answered yes to any of the above questions**, employees require protective headwear. Continue to Step 2.

Step 2: Select the appropriate type of head protection

Once it is determined employees require head protection, the right type and class of headwear should be selected according to the hazards present. A review of the job or task and of the work environment should be conducted to help determine the proper selection of headwear.

Two types of head protection:

- **Type 1:** Provides impact and penetration protection for the crown (area over the top portion of the head) only. If tools, small parts, or other items are dropped from a height (or if you rise under an obstruction and bang your head), you are protected.
- **Type 2:** Provides impact and penetration protection for the crown and laterally (sides.) This is a requirement when working around moving equipment or materials where a side blow is possible.

To determine the type of head protection required, answer the following questions.

In your workplace are there:

	YES	NO
a) Objects moving at head level and/ or above head level?		
b) Potential for objects to strike or penetrate the head?		
c) People working in demolition?		

- **If you answered no to all the above questions**, you can use **Type 1** head protection. Please note this is only permitted where it can be demonstrated that there are no lateral impact hazards and WorkSafeNB permits such head protection to be worn.
- **If you answered yes to any of the questions above**, you are required to use **Type 2** head protection. There is an exception for project sites. Section 40(1) of the General Regulation 91-191 sets the minimum standard to be used on a project site is Type 1, Class E head protection that conforms to CSA standard CSA Z94.1-15. It is best practice to use Type 2, Class E on project sites in order to offer more protection.

Step 3: Determine the appropriate class of head protection

To determine the class of head protection required, answer the following questions.

In your workplace, is there:

	YES	NO
a) Potential for employees to come into contact with high voltage conductors? (up to 20, 000 Volts)	<input type="checkbox"/> Class E (electrical) is required in your workplace.	<input type="checkbox"/> Continue to next question.
b) Potential for employees to come into contact with low voltage conductors? (up to 2, 200 Volts)	<input type="checkbox"/> Class G (general) is suitable for your workplace.	<input type="checkbox"/> Continue to next question.
c) Potential for employees to come into contact with electricity?	<input type="checkbox"/> Return to questions a & b	<input type="checkbox"/> Class C (conductive) is suitable for your workplace.

Note:

- If no hazard assessment is conducted to determine the appropriate headwear (Steps 2 and 3) then the protective headwear defaults to Type 2, Class E. This is because it provides the highest level of protection.
- Appendix A summarizes the protection offered by the different Types and Classes of head protection.







Step 4: Other considerations

Once you determined the type and class of the protective headwear, there may be other elements to consider such as chinstraps, orientation, high visibility and more.

a) Does the headwear need to be worn with the peak forward or backward to accommodate other personal protective equipment (PPE) such as a welding helmet or face shield, or to enhance visibility? Forward <input type="checkbox"/> Backward <input type="checkbox"/>
b) Is protection from sun, rain, etc. required? If so, full brim headwear may be required. Full brim <input type="checkbox"/> Cap style <input type="checkbox"/>
c) Is a chinstrap required? (A chinstrap is required if the headwear could become displaced from the user's head.) Yes <input type="checkbox"/> No <input type="checkbox"/>
d) Is high visibility required? (High visibility is required in low-lighting conditions, at night and where employee visibility is required (e. g., highway construction, forestry, mobile machinery, and traffic control activities.) Yes <input type="checkbox"/> No <input type="checkbox"/>
e) Is there any protection from special processes and unique hazards required? Specify: Yes <input type="checkbox"/> No <input type="checkbox"/>
f) If there are other PPE required (respirators, eye and face protectors and hearing protection, etc.) care shall be taken to select appropriate PPE that does not compromise the protection provided by the headwear. Is there any other PPE required? Specify: Yes <input type="checkbox"/> No <input type="checkbox"/>

Please refer to the CSA standard, Annex A - Figure A.1 - Sample headwear selection form for more information.

APPENDIX A

		Class	Protection	Levels
Type 1 (Top protection only)	 ELECTRICAL 20,000 volts	Type 1, Class E (20,000 V electrical rating)	Impact penetration of the crown 20,000 V ± 3% for 1 min	Electrical trades (top protection)
	 GENERAL 2,200 volts	Type 1, Class G (2,200 V electrical rating)	Impact penetration of the crown 2,200 V ± 3% for 1 min	General usage (top protection)
	 CONDUCTIVE 0 volts	Type 1, Class C (no electrical rating)	Impact penetration of the crown no dielectric protection	Conducting headwear (top protection)
Type 2 (Top and side protection)	 ELECTRICAL 20,000 volts	Type 2, Class E (20,000 V electrical rating)	Impact penetration of the crown penetration of laterally 20,000 V ± 3% for 1 min	Electrical trades (top & side protection)
	 GENERAL 2,200 volts	Type 2, Class G (2200 V electrical rating)	Impact penetration of the crown penetration of laterally 2,200 V ± 3% for 1 min	General usage (top and side protection)
	 CONDUCTIVE 0 volts	Type 2, Class C (no electrical rating)	Impact penetration of the crown penetration of laterally no dielectric protection	Conducting headwear (top and side protection)