

Personal Protective Equipment

Headwear — Selecting Protective Headwear

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What is protective headwear?

Protective headwear refers to various types of headgear or helmets designed to provide protection to the head and, in many cases, the brain from potential injuries or hazards. The specific purpose and design of protective headwear can vary widely depending on the intended use and the type of protection required. Motorcycle or bicycle helmets, riot control helmets, industrial hard hats, bump caps, and firefighting helmets are all examples of protective headwear.

The type of protective headwear will depend on the work being done and the hazards present.

This OSH Answers document refers to protective headwear for use in an industrial workplace, such as construction, manufacturing, forestry, or mining, to protect the head against impact, penetration, and electric shock. Protective headwear is also known as a hard hat or safety helmet.

How do I select protective headwear?

The workplace must assess the risk of head injury and provide the appropriate protection. Some workplaces require all workers and visitors to wear protective headwear (e.g., construction sites). The headwear will depend on the hazards present, your workplace's risk assessment of the work being performed, and the jurisdiction's legislation.

Most legislation references CSA Standard Z94.1-15 (R2020), *Industrial protective headwear – performance, selection, care, and use* as a requirement for hard hat compliance. In the absence of a legislative requirement, the CSA standard is a good guidance document to follow. The CSA standard outlines the various classes and types of protective headwear based on testing and certification requirements.

There are three classes (Class C, G, and E) and two types (Type 1 and 2) of protective headwear. The class refers to dielectric protection, and the type refers to impact and penetration protection. Types and classes of headwear can include:

- Type 1 - protection from impact and penetration at the crown (top) only
- Type 2 - protection from impact, penetration at the crown (top) and laterally (sides and back)
- Each type is also available in the following classes:
 - Class E (20 000 V electrical rating) - provides head protection against high voltage conductors
 - Class G (2200 V electrical rating) - provides head protection against low voltage conductors (general trades)
 - Class C (no electrical rating)

After understanding the hazards and the required protection level, it is important to select headwear that fits the user properly. The headband of the suspension should fit comfortably and be tightened so that it is unlikely to fall off your head when you bend forward and does not shift when you turn your head side to side. The interior suspension is usually designed to fit head sizes 6.5 to 8 and should be adjustable with a ratchet dial in the back to make sure it fits snugly. Speak with your employer or the manufacturer if you require a larger or smaller suspension. Always assemble and fit your hard hat according to the manufacturer's instructions.

Wearing the hard hat properly also includes making sure it is oriented the right way and that baseball-style hats or hoods are not worn underneath. Any winter liners should be secured within the hard hat. Other accessories, such as bandanas, welder's caps, etc., should only be worn if approved by the manufacturer and as long as, when worn, they do not affect the fit. Similarly, if safety or chin straps are required, they must be properly adjusted and secured.

Is there a specific colour required for my hard hat?

The CSA standard Z94.1-15 (R2020), *Industrial protective headwear – performance, selection, care, and use* does not indicate different colours for different jobs. It is important that attention is focused on a hazard assessment and ensuring the hard hat provides the protection required – not the colour.

Workplaces may establish their own colour coding depending on different departments and experience levels. For example, a white hard hat may be reserved for supervision or management, a yellow hard hat may indicate the workers are engaged in manual labour tasks, a blue hard hat may be used for technical roles or general workers, a green hard hat may be reserved for inspectors or those who are new to the worksite, etc.

Some guides are available that outline general colours of protective headwear for various roles; however, it is important that you follow the site-specific guidelines, if available.

Does my protective headwear expire?

The CSA standard Z94.1-15 (R2020), *Industrial protective headwear – performance, selection, care, and use*, requires certain markings and labels on the protective headwear, which include the year and month of manufacture. Manufacturers may state the expected useful life of the headwear; however, it is important to inspect the shell, liner, and suspension daily before each use, looking for cracks, dents, cuts or any other signs of damage and wear. Headwear exposed to heat, sunlight, or chemicals may become chalky, dull, or less flexible. If any of these signs appear, or any other damage is noted, do not use and replace the hard hat immediately.

In addition, headwear should also be replaced if it is struck by an object, even if there is no visible damage.

For more information on the care of protective headwear, please see our OSH Answers [Headwear, Care Of](#).

What are some additional considerations when it comes to protective headwear?

There may be situations where protected human rights appear to conflict with safe work practices, particularly the use of protective headwear. For more information, please see our OSH Answers [Human Rights in the Workplace — Personal Protective Equipment](#).

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