



Personal protec



Everyone knows that personal protective equipment (PPE) is designed to protect them against threats to their safety or health in the workplace. But you may not realize that those threats can include cold temperatures and other kinds of severe weather.

As the temperature falls, workers who spend much of their time outdoors should be sure they are prepared for the cold. At the same time, they should still be able to use all of the PPE that's required both by the law and by their employers. If you are an employer, you also need to think about eliminating the hazards of cold weather if at all possible.

It's important to choose protective clothing that is suitable for the temperature, the work you will be doing, and the physical exertion that is required by the task. A person doing a physically demanding job may need different clothing than a person doing a more sedentary task.

Cold-weather tips

Warm clothing can help prevent a number of cold-weather hazards, such as frostbite and hypothermia. (For more about these hazards, please read "Protect Yourself from Winter Hazards" on page 8.) Cold temperatures can also reduce your mental alertness and manual dexterity, and that can lead to dangerous situations. The following tips can help you choose the right kind of clothing for cold weather:

- Wear several layers of clothing rather than one thick layer. The air that's captured between the layers is an insulator.
- If the job allows it, wear synthetic fabrics, such as polypropylene, next to the skin because they wick the sweat away.
- Don't have your clothing so tight that it restricts your movements.
- If the weather is wet as well as cold, be sure your outer clothing is waterproof, or at least water-repellent.
- Wind-resistant fabrics may also be necessary under some conditions.
- At air temperatures of 3°C (37.4°F) or less, workers whose clothing gets wet for any reason must immediately be given a change of clothing and treated for hypothermia.
- Encourage the use of hats and hoods to prevent heat loss from the head and to protect the ears.
- Balaclavas or other face covers may also be necessary under certain conditions.
- Tight-fitting footwear restricts the blood flow. Footwear should be large enough to allow for either one thick pair of socks or two thin pairs. Wearing too many socks can tighten the fit of footwear and harm rather than help.
- If you get hot while you're working, open your jacket but keep your hat and gloves on.
- When you put on extra layers of clothing for warmth, make sure none of it will pose a hazard, such as by catching on machinery.

Protective equipment and winter weather

Those tips will help keep you warm. But at the same time your winter clothing must be safe. The following sections point out some special safety considerations about particular pieces of PPE and the kind of work you're doing.

Hard hats

Though it's important to keep your head warm, you also have to be sure your hard hat is still protecting you. If you're wearing a hat or hood under the hard hat, make sure it won't allow your hard hat to slide off. Some hoods or "hoodies" can also block your view to the side. It may be safer to wear a winter hard hat liner.



Arc flash hazards

If you are working on or near energized equipment, it's important not only to keep warm but also to make sure your clothing is rated for protection against arc flash hazards. Synthetic materials that can melt should not be worn by workers who are exposed to certain electrical hazards.

PPE, as well as inner layers of clothing, should be made of an appropriate material, such as a natural fibre or an Arc/FR-rated material suitable for the type of work being done.

You should be aware that some undergarments or inner layers of clothing can be unsafe even if your outer layer of clothing is made of an approved material. For example, if a hoodie or turtle neck shirt that you're wearing under your winter jacket is made of non-Arc/FR-rated materials, it can melt in an arc flash incident and cause severe burns.

If you are required to wear rubber protective gloves, as utility workers are for example, your glove liners should also be made of a suitable material such as Merino wool.

Footwear

When you are choosing protective boots, you should also be sure they are warm and will stay dry.



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What the law says about PPE

Since the precise legal requirements for PPE are not the same for every situation or every trade, it is necessary to consult the relevant sections of the *Occupational Health and Safety Act* or the *Regulation for Construction Projects (O. Reg. 213/91)*. Federally regulated firms should refer to the *Canada Labour Code, Part II*.