

# PPE: Answer 6 Questions to Comply with Eye Protection Requirements



Eyes are not only the windows to the soul but also important for basic living. In the workplace, eyes are vulnerable to many hazards, from pieces of material shooting out of equipment to splashes of hazardous substances. In fact, the Canadian National Institute for the Blind says that, every day in Canada, 200 workers sustain on-the-job eye injuries. As a result, the OHS regulations in every jurisdiction require workers to wear proper eye protection when there's a risk of injury to their eyes. So here's a look at the eye protection requirements in the OHS laws and the questions to answer to ensure that your company complies with them.

## Defining Our Terms

The OHS regulations often link eye and face protection together, which makes sense. But because our focus is on protecting workers' eyes, we won't address the face protection elements except in passing and as necessary.

**MODEL POLICY:** [Click here](#) to download a model eye and face protection policy you can adapt for your workplace.

## 6 QUESTIONS ABOUT EYE PROTECTION

Every jurisdiction has eye protection requirements in its OHS regulations. (See the chart at the bottom of the page for the general eye protection requirements in each province and territory.) Although there are some differences, these requirements are generally very similar. Of course, you should always consult the requirements in your jurisdiction's OHS law. But to ensure that you adequately protect workers' eyes from injury, you should know the answers to these six questions:

### 1. Is There a Risk of Injury to Workers' Eyes'

The OHS regulations generally require workers to wear eye protection when there's a risk of injury or irritation to worker's eyes. Some common causes of eye injuries in the workplace include:

- Dust and dirt;
- Tree branches;
- Flying particles from drilling, cutting, digging and other similar operations;
- Ultraviolet radiation from welding and electrical work;
- Abrasives from sandblasting;
- Splashes of molten metal or liquids, such as hazardous chemicals, irritants and corrosives; and
- Fibers from insulating materials, such as fiberglass.
- In addition, certain work activities may pose a particular risk of injury to workers' eyes, such as:
  - Use of compressed air;
  - Operation of a chain saw;
  - Electric arc welding;
  - Use of a power tool, or explosive or powder actuated tool;
  - Grinding and buffing operations; or
  - Operation of an all-terrain vehicle or snow mobile.

## 2. Can We Eliminate or Control the Eye Hazards'

If you've identified hazards that could possibly injure workers' eyes, as with any hazard, the first line of defense is to eliminate or control these hazards through engineering or administrative measures. Some examples of engineering measures to consider include:

- Installing protective screens, wire mesh, safety glass guards or moveable shields on or around machinery to protect workers from flying particles or splashing liquids;
- Enclosing the sources of fine dust, mist or vapors;
- Controlling dust and fumes using ventilation systems; and
- Isolating hazardous operations in separate areas.

An example of an administrative measure would be to require workers to wet down work areas that can produce dust and to seal dusty surfaces.

### **Prescription Safety Glasses'**

## 3. If Not, What Type of Eye Protection Is Appropriate'

If you can't eliminate or control the identified eye hazards, workers will need to wear appropriate eye protection. Which type of eye protection is appropriate will depend on the nature of the eye hazard. And if workers could be exposed to several eye hazards at the same time, select protection that addresses the highest level of hazard. For example, if a worker is exposed to both flying particles and splashing hazardous chemicals, standard safety glasses or glasses with shields wouldn't be appropriate because they'd only protect the worker from the particles and not the chemicals.

What if workers wear prescription glasses or contact lenses? Regular prescription glasses are *not* a substitute for safety eye protection. But prescription eye protection is actually available. For example, workers can wear safety glasses with prescription lenses. In some cases, the OHS laws may have specific requirements for prescription eye protection and workers

Most jurisdictions require eye protection to comply with one of several CSA and ANSI standards, the most common

being CSA Standard Z94.3, *Industrial Eye and Face Protectors*. The CSA standards have seven basic classes of eye protection, in order of degree of protection:

- **Spectacles.** There are two subclasses of spectacles: Class 1A spectacles provide impact protection with side protection, while Class 1B provide impact and radiation protection with side protection.
- **Goggles.** There are three subclasses of goggles:
  - Class 2A goggles provide impact protection with direct ventilation;
  - Class 2B goggles provide impact, dust and splash protection and are either non-ventilated or indirectly ventilated; and
  - Class 2C goggles are either Class 2A or 2B goggles with radiation protection.
- **Welding helmets**, which come in a variety of configurations.
- **Welding hand shields**, which are also available in various configurations.
- **Non-rigid helmets (hoods).** Class 5 has four subclasses:
  - Class 5A hoods have an impact-resistant window;
  - Class 5B hoods are meant for dust, splash and abrasive materials protection;
  - Class 5C hoods provide radiation protection; and
  - Class 5D hoods are intended for high-heat applications.
- **Face shields.** The three subclasses of face shields are:
  - Class 6A face shields provide impact and splash protection;
  - Class 6B face shields offer radiation protection; and
  - Class 6C face shields are intended for high-heat applications.
- **Respirator facepieces.** The last class is broken down into four subclasses:
  - Class 7A respirator facepieces provide impact and splash protection;
  - Class 7B respirator facepieces are Class 7A facepieces with radiation protection;
  - Class 7C respirator facepieces have loose-fitting hoods or helmets; and
  - Class 7D respirator facepieces are Class 7C facepieces with radiation protection.

who wear contact lenses. For example, Secs. 229(2)-(2.3) of Alberta's *OHS Code 2009* spell out detailed requirements for prescription safety eye wear. So if workers usually wear glasses, ensure that they wear prescription eye protection that allows them to see clearly and complies with any such requirements in your jurisdiction's OHS regulations.

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The CSA standard includes detailed information on which of the above types of eye protection are appropriate based on the various kinds of eye hazards.

**Insider Says:** Another non-PPE form of eye protection you may have to provide is an eye wash station, fountain or equipment, which can be essential to helping

remove irritants that get into a worker's eye. In general, the OHS laws require employers to have eye wash stations or equipment if there's a risk that a hazardous substance could get into or injure a worker's eye.

#### **4. How Should Workers Use Eye Protection'**

To be effective, workers must use eye protection correctly. The most important factor is that eye protection must fit properly. If it doesn't fit as intended, it won't adequately protect workers' eyes. In addition, if eye protection doesn't fit properly, it may be uncomfortable and then workers won't wear it when necessary.

Eye protection also shouldn't create safety hazards. For example, it shouldn't obstruct workers' field of vision and should allow them to see clearly. If a worker's view is blocked by his eye protection, he may be at risk of, say, tripping and falling.

**Insider Says:** Whether the employer or worker must provide or pay for eye protection depends on your OHS law and any collective agreements.

#### **5. How Should Workers Maintain Eye Protection'**

It's important for workers to properly maintain their eye protection. For example, if a worker can't see clearly through his safety glasses because they're scratched or very dirty, he could injure himself. So make sure that workers:

- Inspect their eye protection before each use for any kind of damage, such as scratches, bent ear stems or cracks in the lenses. If eye protection is damaged, workers should report it to their supervisor and use other eye protection;
- Clean eye protection regularly following the manufacturer's instructions. For example, certain kinds of cleaners could scratch lenses and so should be avoided; and
- Store eye protection in a clean, dry place where it can't be damaged. If possible, it should be kept in a case when it's not being worn.

#### **6. What Kind of Eye Protection Training Should Workers Get'**

As with any kind of PPE, workers should be trained on the selection of appropriate eye protection and proper use and maintenance of it.

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#### **BOTTOM LINE**

According to the Canadian National Institute for the Blind, an estimated 1,000 eye injuries occur in the North American workplaces *every day*. And with proper eye protection, it's estimated that 90% of these injuries could be prevented. Workplace eye injuries are not only **common** but also **costly**, resulting in:

- Medical and rehabilitation expenses;
- Lost profits and work days; and
- Increased workers' comp premiums.

So it's critical that you ensure that workers wear appropriate eye protection when their eyes are at risk of injury.

<b>KNOW THE LAWS OF YOUR PROVINCE</b> Here are the general eye protection requirements in the OHS law in your jurisdiction:	
<b>FED</b>	<p><i>Canada OHS Regs.:</i></p> <p>1) Where there's a hazard of injury to a worker's eyes, face, ears or front of the neck in a workplace, the employer must provide eye or face protectors that meet the standards set out in CSA Standard Z94.3-M1982, Industrial Eye and Face Protectors, the English version of which is dated May, 1982 and the French version of which is dated February, 1983 [Sec. 12.6].</p>
<b>AB</b>	<p><i>OHS Code 2009:</i></p> <p>1) If a worker's eyes may be injured or irritated at a work site, an employer must ensure that the worker wears properly fitting eye protection equipment that's:</p> <p>a) approved to:</p> <p>i) CSA Standard Z94.3'07, <i>Eye and Face Protectors</i>; or</p> <p>ii) CSA Standard Z94.3'02, <i>Eye and Face Protectors</i>; or</p> <p>iii) CSA Standard Z94.3'99, <i>Industrial Eye and Face Protectors</i>; and</p> <p>b) appropriate to the work being done and the hazard involved [Sec. 229(1)].</p> <p>2) If a worker must wear a full face piece respirator and the face piece is intended to prevent materials striking the eyes, an employer must ensure that the face piece:</p> <p>a) meets the requirements of:</p> <p>i) CSA Standard Z94.3'07, <i>Eye and Face Protectors</i>; or</p> <p>ii) CSA Standard Z94.3'02, <i>Eye and Face Protectors</i>; or</p> <p>b) meets the impact and penetration test requirements of Sec. 9 of:</p> <p>i) ANSI Standard Z87.1'2003, <i>Occupational and Educational Personal Eye and Face Protection Devices</i>; or</p> <p>ii) ANSI Standard Z87.1'1989, <i>Practice for Occupational and Educational Eye and Face Protection</i> [Sec. 229(3)].</p>
<b>BC</b>	<p><i>OHS Regs.:</i></p> <p>1) A worker must wear properly fitting safety eyewear appropriate to the conditions of the workplace if handling or exposed to materials, which are likely to injure or irritate the eyes [Sec. 8.14(1)].</p> <p>2) Properly fitting safety eyewear appropriate to the conditions of the workplace must be worn if a worker:</p> <p>a) has 20/200 or less vision in either eye or is blind in either eye, or</p> <p>b) is working on or testing electrical equipment energized at a potential greater than 30 volts [Sec. 8.14(2)].</p> <p>3) Safety eyewear must be fitted with sideshields when necessary for the safety of a worker [Sec. 8.16].</p> <p>4) Face protectors and non-prescription safety eyewear must meet the requirements of:</p> <p>a) CSA Standard CAN/CSA-Z94.3-92, <i>Industrial Eye and Face Protectors</i>; or</p> <p>b) ANSI Standard Z87.1-1989, <i>Practice for Occupational and Educational Eye and Face Protection</i> [Sec. 8.17(2)].</p>
<b>MB</b>	<p><i>Workplace Safety &amp; Health Regs.:</i></p> <p>1) An employer must provide a worker with an eye or face protector that meets the requirements of CAN/CSA-Z94.3-02, <i>Eye and Face Protectors</i> and CSA Standard Z94.3.1-02, <i>Protective Eyewear: A User's Guide</i>, and that's appropriate for the risk if there's a risk of irritation or injury to the worker's face or eyes from:</p> <p>a) flying objects or particles;</p> <p>b) splashing liquids or molten metal;</p> <p>c) ultraviolet, visible or infrared radiation; or</p> <p>d) any other material, substance or matter [Sec. 6.13(1)].</p>

NB	<p><i>OHS Regs. :</i></p> <p>1) Where a worker's exposed to a hazard that may irritate or injure the eyes, face, ears or front of the neck, the worker must use protective equipment that's appropriate to the hazard and that conforms to CSA standard CAN/CSA-Z94.3-92, <i>Industrial Eye and Face Protectors</i> or a standard offering equivalent protection [Sec. 39].</p> <p>1) Where a worker's exposed to a hazard that may injure the skin, the employee shall use, as necessary, adequate eye protection [Sec. 42(d)].</p>
NL	<p><i>OHS Regs. :</i></p> <p>Where a worker handles or is exposed to materials or conditions that are likely to injure or irritate the eye or face, an employer must ensure that he or she wears properly fitting face and eye protection appropriate to the conditions of the workplace and in accordance with the requirements of CSA Standard CAN/CSA Z94.3 <i>Industrial Eye and Face Protectors</i> [Sec. 75].</p>
NT/ NU	<p><i>General Safety Reg. :</i></p> <p>1) An employer must ensure that properly fitting and adequate goggles, face shields or other eye protective equipment is provided to and used by a worker who's:</p> <p>a) exposed to or handles any material, chemical or gas that's likely to injure or irritate the eyes; or</p> <p>b) exposed to hazard from flying objects or particles, intense light or heat [Sec. 48(1)].</p> <p>2) An employer must ensure that eye protective equipment complies with the Canadian Standards Association Standard CAN/CSA-Z94.3-92, <i>Industrial Eye and Face Protectors</i>, as amended from time to time [Sec. 48(2)].</p>
NS	<p><i>OHS General Reg. :</i></p> <p>1) Where a person is exposed to a hazard that may irritate or injure the eyes, face or front of the neck, an employer must ensure that protective equipment is worn that's appropriate to the hazard and that complies with CSA standard CAN/CSA-Z94.3-99, <i>Industrial Eye and Face Protectors</i> [Sec. 10(1)].</p> <p>2) The above doesn't apply if a person operating a chain saw is wearing adequate face protection as a substitute for the protective equipment referred to above [Sec. 10(2)].</p>
ON	<p><i>Industrial Establishments Reg. :</i></p> <p>1) A worker exposed to the hazard of eye injury must wear eye protection appropriate in the circumstances [Sec. 81].</p> <p><i>Construction Projects Reg. :</i></p> <p>2) A worker must use protection appropriate in the circumstances when there's a risk of eye injury to the worker [Sec. 24].</p>
PE	<p><i>OHS Regs. :</i></p> <p>1) The employer must ensure that a worker exposed to a hazard that could irritate or injure the eyes or face wears protection appropriate to the hazard and that meets the standards and specifications of the CSA Standard Z94.3 <i>Industrial Eye and Face Protectors</i> or a standard offering equivalent protection [Sec. 45.7].</p> <p>2) The employer must ensure that a worker who has 20/200 vision in either eye, or is blind in either eye, wears eye protection as required by Sec. 45.7 [Sec. 45.8].</p>

QC	<p><i>Reg. respecting occupational health and safety:</i></p> <p>1) The wearing of an eye protector or a face protector acquired on or after May 5, 2011, and complying with CAN/CSA Z94.3-07 <i>Eye and Face Protectors</i> is mandatory for any worker who's exposed to a danger that may cause injury to his eyes or face by:</p> <ul style="list-style-type: none"> <li>a) particles or objects;</li> <li>b) dangerous substances or molten metal; or</li> <li>c) intense radiation. However, protectors in good condition and complying with CAN/CSA Z94.3-92, CAN/CSA Z94.3-99 or CAN/CSA Z94.3-02 are considered to offer adequate protection [Sec. 343].</li> </ul>
SK	<p><i>OHS Regs.:</i></p> <p>1) Where there's a risk of irritation or injury to the face or eyes of a worker from flying objects or particles, splashing liquids, molten metal or ultraviolet, visible or infrared radiation, an employer or contractor must provide industrial eye or face protectors and require the worker to use them [Sec. 93(1)].</p> <p>2) Where an industrial eye or face protector is required by these regulations to be provided or used, the industrial eye or face protector must be approved [Sec. 93(2)].</p> <p>3) Where workers are routinely exposed to a hazardous material or substance, an employer or contractor must provide, and require workers to use, protective clothing, gloves and eyewear or face shields that are adequate to prevent exposure of a worker's skin and mucous membranes to the hazardous material or substance [Sec. 98].</p>
YT	<p><i>OHS Regs.:</i></p> <p>1) A worker must be required to wear properly fitting safety eyewear, goggles, face shields, side shields, glasses or other such protective items provided by the employer and appropriate to the workplace conditions when the worker:</p> <ul style="list-style-type: none"> <li>a) handles, uses or is exposed to materials or substances that may injure the eyes;</li> <li>b) is engaged in or is around work or processes where objects or particles may fly, be thrown about or otherwise cause danger of impact with the eyes;</li> <li>c) is exposed to excessive light, heat rays, electric arcs or similar hazards;</li> <li>d) has 20/200 or less vision in either eye or is blind in either eye;</li> <li>e) is working on or testing energized electrical equipment; or</li> <li>f) is working with laser beams [Sec. 1.22].</li> </ul> <p>2) Face protectors, prescription and non-prescription safety eyewear shall meet the requirements of:</p> <ul style="list-style-type: none"> <li>a) CSA Standard Z94.3-02, <i>Eye and Face Protectors</i>;</li> <li>b) ANSI Standard Z87.1-2003, <i>Occupational and Education Personal Eye and Face Protection Devices</i>; or</li> <li>c) other similar standards acceptable to the director [Sec. 1.23].</li> </ul>