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Z94.3-15

Eye and face protectors

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Eye and face protectors



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Preface

This is the eighth edition of CSA Z94.3, *Eye and face protectors*. It supersedes the previous editions, published in 2007 and 2002 under the same title and in 1999, 1992, 1988, 1982, and 1969 under the title *Industrial Eye and Face Protectors*.

- ① Major changes to this edition include the following:
- added Hazard Type I (lasers) and provision for laser radiation protection (Clauses 4 and 8.6);
 - added Hazard Type J (arc flash) and provision for electric arc flash protection (Clauses 4, 8.7, 9.3.6, and 10.5);
 - revised optical requirements for plano eyewear with non-prescription reading segments (Clause 12.6);
 - revised the specified headform used for impact and penetration tests (Clauses 12.2.1, 12.11.1, and 12.13);
 - added allowance for two sizes of steel ball and broadening of hardness range of steel balls used for impact tests (Clauses 6.1.3.1, 6.1.3.2, and 12.2.1.3);
 - updated Table 5 provisions for types of lenses presumed to be compliant with this Standard;
 - refined the ignition and flame-resistance requirements and test procedures (Clauses 6.2 and 12.3).
 - clarified the points of impact for face shields and welding protectors (Clause 12.2.2);
 - extended the method for determining field of view — accommodating curved lens surfaces (Clauses 8.4.1, 12.12.2, and 12.12.3); and
 - added new Annex (F) showing exemplars of lens performance under the impact test.

As introduced in the 2002 edition, the basic performance requirements apply to all protectors covered in this Standard, whereas the test procedures specified differ for prescription eyewear and non-prescription eyewear.

As in previous editions, for non-prescription protectors, specified testing procedures are to be conducted using the whole assembled product (not individual components). In contrast, for Class 1 protectors having prescription lenses, performance criteria and test procedures are applied to lenses and frames separately. This Standard sets out requirements for the manufacture of these protectors (e.g., quality assurance). In addition, special allowance has been made in this edition for the role of ophthalmic professionals in adjusting and modifying spectacles to fit the individual wearer. When taken together, these requirements provide a basis for conformity assessment of protective spectacles with prescription lenses.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was prepared by the Technical Committee on Eye and Face Protection, under the jurisdiction of the Strategic Steering Committee on Occupational Health and Safety, and has been formally approved by the Technical Committee.

Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
- 3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*

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 - rationale for the change.

Z94.3-15

Eye and face protectors

1 Scope

1.1

This Standard applies to eye and face protectors used in all occupational and educational operations or processes involving hazards to the eyes or face. Typical hazards include flying objects and particles, splashing liquids, molten metal, and ultraviolet, visible, and infrared radiation, but do not include X-rays, gamma rays, high-energy particulate radiation, radioactive materials, or masers.

Note: *The guidelines for protection outlined in Annex A should be followed when similar potentially hazardous activities are conducted in the home, at leisure, and in recreational environments. For certain sports activities, other Standards should be consulted (e.g., CSA Z262.2).*

1.2

This Standard sets minimum performance requirements in the tests described herein but does not cover factors of design such as comfort, service life, or appearance.

Note: *The conformance of protectors with these requirements does not imply equality of performance, nor should it be interpreted to mean that protectors are capable of affording greater protection than is specified in this Standard.*

1.3

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

2 Reference publications

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below.

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Industrial protective headwear — Performance, selection, care, and use