



May 28, 2010

**ANSI Z87.1-2010 Standard Update for Eye and Face Protective Devices\***

\* Safety prescription spectacle protective devices may have different requirements in some cases.

**ANSI Z87.1-2010 has been approved.**

The American National Standards Institute (ANSI) on April 13, 2010, approved a new edition of ANSI/ISEA Z87.1 titled *"American National Standard Practice for Occupational and Educational Personal Eye and Face Protective Devices"*, replacing the Z87.1-2003 version.

This summary of the revision of this eye and face protection standard focuses on the key changes to the standard; it does not represent any official or legal interpretation of the standard or even serve as a complete summary of the revision. If questions occur, the revised standard itself should be reviewed and relied on, rather than this summary. For an official copy of the newly revised ANSI/ISEA Z87.1-2010 Standard go to <http://www.safetysafetyequipment.org/c/stdz871-2010.cfm>

**What are the major changes from the previous (2003) ANSI standard?**

**Summary**

This new edition, ANSI/ISEA Z87.1-2010, replaces the Z87.1-2003 standard. As of the date of this summary, the Occupational Safety and Health Administration (OSHA) has not incorporated the 2010 standard into the eye and face protection regulation (29 CFR 1910.133)

The key changes to the eye and face protection standard include:

**1) A focus on the hazard**, rather than on the protector type, to encourage safety personnel and users to evaluate and identify specific hazards in their workplace such as Impact, Optical Radiation, Splash, Dust, and Fine Dust Particles. Therefore, under the revised standard, selection of the appropriate eye and face protective devices should be based on the hazard.

**2) New criteria for compliance:**

Impact ratings:

The 2003 version described two levels of protection: "Basic" & "High" impact protection. The 2010 revision describes devices to be either "Non Impact Rated" (complying to the impact requirements under "General Requirements") or "Impact Rated" (complying to more stringent requirements within the revision).

Minimum coverage requirements:

The 2003 version had no defined minimum coverage requirement. The 2010 revision has a minimum frontal requirement and, for an "Impact Rated" device, a lateral coverage requirement. In effect, this makes lateral coverage MANDATORY for an "Impact Rated" device.

New test for splash/droplet, dust and fine dust:

The 2003 version had no defined performance criteria for splash/droplet, dust or fine dust. The 2010 revision has specific performance and marking requirements for devices claiming to provide protection from splash/droplet, dust or fine dust hazards.

New "Ignition" test:

The 2010 revision eliminates the previous (2003) flammability test and replaces it with an ignition test which uses a hot steel rod contacting the protector to determine if the protector will ignite.

New headform for product testing:

The 2003 version used the "Alderson" headform. The 2010 revision adopts the European (CE) small & medium headform size for testing to harmonize with existing international test methods.

### 3) New markings requirements

#### Lens markings:

The 2010 revision requires a manufacturer's mark and, if the product is "Impact Rated", a "+" symbol.

Example: "3M" only for non-Impact Rated product

Example: "3M+" for an Impact Rated product

The 2010 revision requires "Optical Radiation" scale or shade marking. There are tables and markings for specific lens types (clear, welding, UV filter, visible light filter and IR filter).

Example: "3M+W3" for a spectacle welding lens with a shade 3.0 welding filter

#### Frame markings:

The 2010 revision requires a manufacturer's mark plus Z87 and, if the product is "Impact Rated", a "+" symbol will follow the Z87.

Example: "3M Z87+"

If the product is NOT "Impact Rated", the frame will only be marked with the manufacturer's mark plus Z87

Example: "3M Z87"

**4) New section on selection, use and maintenance.** This section provides guidance on hazard assessment and selection. It also includes a pull-out selection chart, showing recommended protectors for various types of work activities that can expose the worker to impact, heat, chemical, dust or optical radiation hazards.

<b>What does this standard mean for me/my business?</b>
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The new standard is a voluntary standard and there is no requirement that manufacturers or end users comply with it unless it is mandated by OSHA. However, in the past, most protective eyewear manufacturers have chosen to comply with the most recent revision to the Z87.1 Standard.

<b>When will 3M have products that conform to the new standard?</b>
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As with any standard, there will be a time lag before protective eyewear and the packaging with the new markings appear in the marketplace. At present, there is NO "deadline" to mark, sell, or use products with these new requirements of the 2010 edition of the ANSI/ISEA Z87.1 Standard.

3M is planning to manufacture, test and mark all protective eyewear in compliance with the new ANSI/ISEA Z87.1-2010 Standard. Product bearing the new markings will be phased in as the current inventory of ANSI Z87.1-2003 marked product is exhausted. 3M will provide updated information on products as it becomes available. If you require compliance information for any 3M eye and face protective products, please contact 3M OH&ESD Technical Services at 1-800-243-4630.