

ANSI/ISEA Z87.1-2015

American National Standard for Occupational and Educational Personal Eye and Face Protection Devices



On May 28, 2015, American National Standards Institute (ANSI) issued approval for ANSI/ISEA Z87.1-2015, American National Standard for Occupational and Educational Personal Eye and Face Protection Devices. This standard was prepared by members of the ISEA Eye and Face Protection Group as a revision to the 2010 edition, and approved by a consensus review panel comprised of experts, unions, construction industry and other user groups, test labs and certification and government agencies.

What is ANSI/ISEA Z87.1-2015?

ANSI/ISEA 287.1-2015 Standard provides the design, performance specifications and marking of safety eye and face protection products. The Standard offers employers options for choosing the appropriate level of protection for eye and face hazards in a given workplace environment. The standard addresses the following:

- Impact, Optical, Droplet, Splash, Dust and Fine Dust Requirements
- Test Methods for evaluating all requirements
- Instructions, Use and Maintenance
- Selection Guide
- Protector Marking Guideline Tool

Why was a new revision developed?

Voluntary industry consensus standards recognized by ANSI are required to be reviewed every five years; the previous edition was ANSI/ISEA Z87.1-2010. This standard continues to develop and evolve by adapting the content in accordance with global standards. The language within the standard has been streamlined to provide clarity to ensure accurate execution. Additionally, there has been an increased emphasis on selecting appropriate protectors for the working environment. The standard has expanded the information related to conducting and assessing potential eye and face hazards.

What updates have been made to ANSI/ISEA Z87.1-2015?

1 Section 2.1: Scope

In the list of hazards addressed by the standard, “chemical exposures” has been changed to “liquid splash exposures”. This change was incorporated because there is no specific test for chemical exposures per the standard.

2 Section 5.4.3.3: Cover Lenses

This addition to the standard exempts cover lenses from requirements of the optical or impact requirements in the standard.

3 Section 5.3.4: Welding Protectors

This addition to the standard requires that manufacturers provide user information, including instructions on lens installation, minimum lens and retention information, precaution to follow manufacturer’s instructions, nominal thickness and material type of cover lens.

4 Section 5.6: Aftermarket Components

Clarification language was added to this section to ensure that customers understand that aftermarket components must also comply with the requirements of this standard. The addition of aftermarket accessories may affect compliance. Testing should show compliance as claimed for the original device after adding components or accessories. Any entity claiming compliance should provide evidence of compliance upon request.

5 Section 7.2.1.2 Visible Light Filters

Visible Light filters in the range of L1.3-L3, including traffic signals and UV transmittance have been added to the transmittance requirements.

6 Section 7.3.5 Angular Dependence of Luminous Transmittance

A new requirement was added to the testing for automatic darkening filters to address the visual effect that welders can find alarming and distracting. This test measures the light filtration at specified angles.

7 Section 9.16: Angular Dependence of Luminous Transmittance Test for Automatic Welding Filter Lenses

This section defines the test setup and procedure to test for requirements in section 7.3.5. The test will now include additional viewing angles to test the filtration of the Automatic Welding Filter.

The new Standard and Product Compliance

ANSI/ISEA Z87.1-2015 does not require users to discontinue using products labeled as compliant with the 2010 Standard. However, if your occupation requires compliance with new optional certifications, older product will not be marked and may not be compliant.

Conclusion

Worker safety is always the highest job-site priority. Eye and face protection is an essential element in providing workers with protection from impact hazards, liquid splash, debris and electrical hazards. A Standard-compliant, properly marked eye and face protector should be worn in all situations where eye and face hazards exist.

A copy of ANSI/ISEA Z87.1-2015 can be purchased from International Safety Equipment Association (ISEA): visit <https://safetyequipment.org/>