



**INTERNATIONAL SAFETY
EQUIPMENT ASSOCIATION**
The Catalyst for Safety Worldwide

ANSI / ISEA Z87.1-2020

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

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

Secretariat
International Safety Equipment Association

Approved March 11, 2020
American National Standards Institute, Inc.

American National Standard

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Foreword (This Foreword is not a part of ANSI/ISEA Z87.1-2020)

ANSI/ISEA Z87.1-2020 represents the sixth revision of the voluntary industry consensus standard for eye and face protection, which is also codified in regulatory text by the U.S. Occupational Safety and Health Administration obliging employers to provide employees with appropriate safety eyewear and face protection that conforms to the industry standard.

The document continues to focus on product performance and harmonization with global standards in an effort to allow new and innovative designs responsive to workplace hazards and end-user needs. To this end, this current version includes criteria and requisite markings for protectors offering relaxed optics, as an option to the long-standing requirements. This in response to the recognition that certain job tasks and applications, such as those performed by first-responder, firefighting or military personnel, may not need require the stringent optical criteria historically imposed. It is cautioned that protectors with relaxed optics may not be appropriate for industrial applications such machinery operation, precision work, or in laboratory environments, and as such, a proper hazard assessment should be conducted.

Additionally, the 2020 version includes testing, performance and marking criteria for lenses with anti-fog properties. While this lens-only assessment is a departure from a final configuration approach generally applied throughout the standard, it is recognized that fogging can impede a wearer's ability to perform work safely. Such requirements are consistent with criteria in similar global standards and have been incorporated for the benefit of the wearer.

Other key updates address the emergence of innovating product designs which past editions did not contemplate. These are seen by changing transmittance allowances and expanded welding filter shades. Additional clarifications have been made throughout to provide consistency in testing execution such as when applying dark-state tolerances for automatic darkening welding filters or determining the minimum coverage area with respect to the specified headform.

Suggestions for improvement of this standard are welcome. They should be sent to the International Safety Equipment Association, isea@safetyequipment.org.

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Safety Standards for Eye Protection, Z87. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the Z87 Committee had the following members:

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American Society of Safety Professionals

American Welding Society

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National Institute for Occupational
Safety and Health (NIOSH)
Optical Laboratories Association

Opticians Association of America
Power Tools Institute

Safety Equipment Institute

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