

The new standard is a voluntary standard and there is no requirement that manufacturer or end user comply with it unless it is mandated by the United States Department of Labor – OSHA. However, in the past, most manufacturers have chosen to comply with revisions to the Z87.1 Standard.

Currently, OSHA requires (29 CFR 1910.133) that eye protectors comply with the 1989 version of the Z87.1 Standard, and eye protection devices now in use may continue to be used.

All AOSafety eye protectors already comply with the performance requirements of the new standard.

1. **Two Levels of Protection: Basic and High**

LENSES: The new standard designates that lenses will be divided into two protection levels, Basic Impact and High Impact as dictated by test criteria.

Basic Impact lenses must pass the “drop ball” test, a 1" diameter steel ball is dropped on the lens from 50".

High Impact lenses must pass “high velocity” testing where 1/4" steel balls are “shot” at different velocities.

Spectacles: 150 ft./sec.

Goggles: 250 ft./sec.

Faceshields: 300 ft./sec.

FRAMES: Now, all eyewear/goggle frames, faceshields or crowns must comply with the High Impact requirement. (This revision helps eliminate the use of “test lenses”, and assures all protectors are tested as complete - lenses in frame - devices).

After making an eye hazard assessment, employers (safety personnel) should decide on

appropriate eyewear to be worn, although High Impact would always be recommended. All AOSafety spectacles are High Impact protectors.

2. **Now, Products Must Indicate Impact Protection Level.**

To identify a device’s level of impact protection, the following marking requirements apply to all new production spectacles, goggles and faceshields

Basic Impact spectacle lenses will have the manufacturer’s mark, i.e. an AOSafety product will have “AOS”. Goggles and faceshields will have AOS and Z87 (AOS Z87).

High Impact spectacle lenses will also have a plus + sign, (AOS+).

All AOS goggle lenses and faceshield windows are to be marked with the manufacturer’s mark, Z87, and a + sign (AOSZ87+).

Note: Lenses/windows may have additional markings. Shaded lens will have markings denoting a shade number such as 3.0, 5.0 etc. Special purpose lenses will be marked with “S”. A variable tint lens will have a “V” marking.

3. **Sideshield Coverage Area Increased**

Sideshield coverage, as part of the lens, part of the spectacle, or as an individual component, has been increased rearward by 10-millimeters via a revised impact test procedure.

While side protection in the form of wrap-around lens, integral or attached component sideshield devices is not mandated in this standard, it is highly recommended. Further, OSHA does require lateral protection on eye protection devices wherever a flying particle hazard may exist, and flying particle hazards are virtually always present in any occupational environment. All AOSafety non-prescription safety spectacles meet the requirements of OSHA and the new Z87.1 for side protection.

4. **No Minimum Lens Thickness Requirement For High Impact Lenses.**

The new standard does not have a “minimum lens thickness” requirement for High Impact spectacle lenses. The previous standard required a 2-millimeter “minimum”. However, the protective advantages of wrap-around lenses and the many other advancements in eyewear design, have eliminated this need.

Note: Glass lenses still fall into the Basic Impact lens category. The “minimum lens thickness” of 3 millimeters remains in effect for this category.

5. **New Respirator Categories Added.**

Two respirator categories have now been added to the eye protection standard: Full Facepiece and Loose Fitting Respirators.

Full Facepiece respirators must comply with the performance requirements of goggles (Full Facepiece Welding respirator must comply with a Welding Goggle). Loose Fitting respirators must comply with the performance requirements of faceshields (Loose Fitting Welding respirator must comply with a Welding Helmet).

6. **New Improved Selection Guide and Injury Report Form**

The new standard has an enhanced and more detailed “Protective Device Selection Guide.” As devices and impact protection varies significantly, this new guide will be helpful in choosing the proper eye protection.

To better understand the causes of occupational and educational eye injuries, the new standard includes a non-mandatory eye injury reporting form.

The revision to the ANSI Z87.1-1989 (R 1998) standard, entitled ANSI Z87.1 -2003 "Practice for Occupational and Educational Eye and Face Protection Devices" is due to be published in mid to late summer.

This pamphlet is a summary of the 6 key changes concerning plano/non-prescription devices including spectacles, goggles and faceshields.

Want A Copy Of The New Standard?

Just call, mail, or email:
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Aearo Company is proud to have one of its employees as a voting member on the Z87.1 Committee and will be happy to answer any questions. Just call our Technical Services Hotline 800-444-4774.

**The New
ANSI Z87.1 –
2003 Standard
For Eye and
Face Protection**

***A Guide To
The Changes.***



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