

American National Standard

*for Ophthalmics –
Nonprescription Sunlass and
Fashion Eyewear Requirements*



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ANSI Z80.3-2009

American National Standard
for Ophthalmics –

Nonprescription Sunglass and Fashion Eyewear Requirements

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The Vision Council

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American National Standard

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The Vision Council
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Suite 500
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Foreword (This foreword is not part of American National Standard ANSI Z80.3-2010.)

Changes made from ANSI Z80.3-2009 are the addition of subclauses 4.9 (Resistance to radiation) and 5.8 (Resistance to radiation test); the revision of 5.7 (Photosensitive lens qualification test); the addition of 3.9.1.2 (Polarizing efficiency); correction of equations 3.9.2 and 5.6.2 for the calculation of Mean transmittance; the addition of clause 6 (Country of origin); and the addition of an equation to the Notes under Table 5.

The purchasers and users of nonprescription sunglasses and fashion eyewear need to be assured of certain minimum levels of performance and quality in these products. These are either implicit expectations in the product performance, or safety. The purchaser of the product does not ordinarily have the means to properly assess these characteristics.

In order to accomplish these goals, it is necessary to establish commonly accepted definitions, equations, sources, and methodology so that manufacturers can produce products to meet the standard.

This American National Standard specifies impact-resistant characteristics; cosmetic, refractive, and transmittance properties of lenses; and the flammability of frames and lenses.

Cosmetic, refractive, transmittance, and frame properties specified herein are intended as guidelines, and therefore they are subject to revision since there is a need to study further the validity of these property specifications as related to actual normal use requirements.

The Z80.3 Subcommittee was organized in December 1970 and had its first meeting on January 7, 1971. The current Chair of the committee is Kenneth L. Frederick, Technical Director of the Sunglass Association of America. He has been chair since 2004. The committee usually meets formally twice per calendar year, and the members review material by email, phone, or fax throughout the year. Working groups may be formed to investigate specific projects.

This standard contains one annex, which is informative and is not part of this standard.

Suggestions for improvement of this standard will be welcome. They should be sent to the Vision Council, 1700 Diagonal Road, Suite 500, Alexandria, VA 22314

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Ophthalmic Optics, Z80. Committee approval of this standard does not necessarily imply that all committee members voted for its approval. At the time of approval of this standard, the Z80 Committee consisted of the following members:

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Charles Campbell, US Leader to ISO TC 172/SC7
The Vision Council

American National Standard for Ophthalmics –

Nonprescription Sunglass and Fashion Eyewear Requirements

1 Scope and purpose

1.1 Scope

This standard applies to all nonprescription sunglasses and fashion eyewear, normally used for casual, dress, and recreational purposes, having lenses of substantially plano power. This standard specifically excludes products covered by ANSI Z87.1-2003, ANSI Z80.1-2010, ASTM F803-2003, and high-impact resistance eyewear designed exclusively for designated sports use. Sunglass needs for aphakics may not be met by this standard.

1.2 Purpose

The purpose of this standard is to establish standards for noncorrective (essentially plano power) lenses that are intended for attenuation of light and for fashionwear, and for the flammability of frames and lenses. These products are commonly called sunglasses, and they are not designed to be industrial safety eyewear as defined in ANSI Z87.1-2003, or to provide corrective prescriptions as defined in ANSI Z80.1-2010, or to provide protection for selected sports defined in ASTM F803-2003. Lenses covered by this standard are not intended for use under conditions of reduced illumination, such as for night driving; however, variable tint lenses that fade to a luminous transmittance greater than 75% are covered.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ANSI Z80.1-2010, *Recommendations for prescription ophthalmic lenses*¹

ANSI Z80.17-2008, *Focimeters*¹

ANSI Z87.1-2003, *Practice for occupational and educational eye and face protection*¹

ANSI/ASQC Z1.4-1993, *Sampling procedures and tables for inspection by attributes*¹

ASTM D412-2002, *Test methods for rubber properties in tension*²

ASTM F803-2003, *Eye protectors for use by players of selected sports*²

ASTM D2240-2003, *Standard test method for rubber property-durameter hardness*²

Title 21, Code of Federal Regulations, Section 801.410³

¹ For electronic copies of some standards, visit ANSI's Electronic Standards Store (ESS at www.ansi.org). For printed versions of all standards, contact ANSI's Customer Service Department at 212-642-4900.

² Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

³ Available from the Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954.