

American National Standard

*for Ophthalmics –
Requirements for Ophthalmic Frames*



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ANSI®
Z80.5-2010
Revision of
ANSI Z80.5-2004

American National Standard
for Ophthalmics –

Requirements for
Ophthalmic Frames

Secretariat
The Vision Council

Approved April 20, 2010

American National Standards Institute, Inc.

American National Standard

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Developed by

The Accredited Committee Z80 for Ophthalmic Standards -

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Foreword (This foreword is not part of American National Standard ANSI Z80.5-2010.)

The Z80 Standards Committee for Ophthalmic Lenses was organized in 1956, and the committee's initial standard was issued in 1964. At the beginning of 1970, the Z80 Standards Committee was reorganized, with the Optical Society of America servicing as secretariat. In 1972, the committee was authorized to broaden its scope from "prescription glass ophthalmic lenses" to prescription ophthalmic lenses." Subsequently, the scope of the committee was further broadened to "ophthalmic standards."

In 1970, the Z80 Committee Ophthalmic Lenses, appointed a Subcommittee on Ophthalmic Frames to draft standard requirements for dress ophthalmic frames.

The 2010 revision calls out additional frame material characteristics associated with biocompatibility and relegates the biocompatibility of those requirements to state and federal standards or guidelines. The 2004 revision provided tighter tolerances for eye size and shape and also updated the references to ISO standards to the newest versions. The 1997 revision incorporated the boxing system of frame measurements, which has been in use in the United States since 1962, as well as the Optical Industry Associations-(OMA) standard requirements for marking and stamping gold and gold-filled frames. It also dealt with flammability and impact resistance of frames.

In 1982, the Optical Laboratories Association assumed the responsibilities of the Secretariat; and in 1985, the Z80 Committee became an Accredited Standards Committee (ASC). In 2009, The Vision Council became the Secretariat of ASC Z80. The Scope of the Z80 Committee is for the establishment of standards that shall apply to ophthalmic lenses and to equipment, instrumentation and to processes used in the final fabrication level which affect their performance to ophthalmic frames, sunglasses and fashion eyewear; to contact devices in addition to contact lenses; and to optical instrumentation used in ophthalmic procedures and vision evaluation.

Suggestions for improvement of this standard will be welcome. They should be sent to: The Vision Council, 1700 Dirona Road, Suite 500, Alexandria, VA 22033

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

Thomas White, M.D., Chairman
Quido Cappelli, Vice-Chairman
Robert Rosenberg, O.D., Secretary

<i>Organization Represented</i>	<i>Name of Representative</i>
Advance Medical Technologies Association	Douglas Fortunato
American Academy of Ophthalmology	Dr. Thomas White
American Academy of Optometry	Dr. David Loshin
American Ceramic Society	Lyle Rubin
American Glaucoma Society	Dr. Steven Gedde
American Optometric Association	Dr. Jeffrey Weaver
American Society of Cataract and Refractive Ophthalmology	Dr. Stephen Klyce
Contact Lens Institute	Stan Rogaski
Contact Lens Manufacturers Association	Quido Cappelli
Department of Veterans Affairs	Dr. John Townsend
Federated Cornea Societies/ASCRS	Dr. Michael Belin
Food & Drug Administration	Don Calogero
National Association of Optometrists & Opticians	Nick Mileti

<i>Organization Represented</i>	<i>Name of Representative</i>
Optical Laboratory Association	Daniel Torgersen
Opticians Association of America	Tom Hicks
Sunglass Association of America	Kenneth Frederick
TAG Leader to ISO TC 172/SC7	Charles Campbell
The Vision Council	Jeff Endres

The Z80 Subcommittee on Frames, which developed this standard had the following members:

E. Nick Mileti, Chairman

Jeff Endres
 Kenneth Frederick
 Virginia Leshar
 Darin McCormick
 Dale Pfriem
 Rick Tinson
 Ken Wood

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American National Standard for Ophthalmics –

Requirements for Ophthalmic Frames

1 Scope and Purpose

1.1 Scope

This standard shall apply to the manufacture of all frames intended for street wear as ophthalmic eyewear with prescription lenses, excluding specialty and novelty products such as lorgnettes and monocles. Specifically excluded are products designed to be occupational eyewear as defined in *American National Standard for Occupational and Educational Personal Eye and Face Protection Devices*, ANSI/ISEA Z87.1-2010, frames for nonprescription sunglasses, and fashion eyewear as defined in *American National Standard for Ophthalmics – Nonprescription Sunglass and Fashion Eyewear Requirements*, ANSI Z80.3-2009, and sport frames as defined in *Specification for Eye Protectors for Selected Sports*, ANSI/ASTM F803-03.

1.2 Purpose

Standards of quality and uniformity are established for all ophthalmic frames, except as noted above. Nothing in this standard restricts the introduction of changes arising from future improvements in materials or technology which meet or exceed the requirements of this standard.

2 Normative references

The following standards contain provisions which, though referenced 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, *Ophthalmics – Prescription spectacle lenses*¹

ANSI/ASME B1.1-2003, *Unified inch screw threads (UN and UNR thread form)*¹

ANSI/ISEA Z87.1-2010, *Occupational and educational personal eye and face protection devices*¹

ASTM B863-09, *Standard specification for titanium and titanium alloy wire*²

ASTM D635-03, *Test method for rate of burning and/or extent and time of burning of self-supporting Plastics in a Horizontal Position*²

ISO 15824-2:2002, *Ophthalmic optics – Spectacle frames – Measuring system and terminology*¹

Bureau of Customs Ruling, *Marking of Imported Eyeglass and Sunglass Frames*, 19 Code of Federal Regulations, Part 134

¹ Available from the American National Standards Institute, 25 West 43rd Street, New York, NY 10036.
www.ansi.org.

² Available from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, www.astm.org.