



Standard Specification for Eye Protectors for Field Hockey¹

This standard is issued under the fixed designation F2713; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers eye protectors with a plano (that is, non-prescription) lens or without a lens, designed for use by players of field hockey, that minimize or significantly reduce injury to the eye and adnexa due to impact by and penetration of field hockey balls and field hockey sticks. Contact with the eye of the headform constitutes failure. Protective eyewear offers protection only to the eyes and does not protect other parts of the head.

1.2 Testing is done in a laboratory setting. Eye contact is determined by observation.

1.3 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only. Metric units of measurement in this specification are in accordance with the International System of Units (SI). If a value for measurement as given in this specification is followed by an equivalent value in other units, the first stated is to be regarded as the requirement. A given equivalent value may be approximate.

1.4 The following precautionary caveat pertains only to the test methods portion (Sections 8, 9, and 10) of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards*:²

D1003 Test Method for Haze and Luminous Transmittance of Transparent Plastics

F1887 Test Method for Measuring the Coefficient of Restitution (COR) of Baseballs and Softballs

¹ This specification is under the jurisdiction of ASTM Committee F08 on Sports Equipment, Playing Surfaces, and Facilities and is the direct responsibility of Subcommittee F08.57 on Eye Safety for Sports.

Current edition approved Sept. 1, 2014. Published September 2014. Originally approved in 2009. Last previous edition approved in 2013 as F2713 – 13. DOI: 10.1520/F2713-14.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

F1888 Test Method for Compression-Displacement of Baseballs and Softballs

2.2 *ANSI Standards*:³

ANSI Z80.3 Requirements for Nonprescription Sunglasses and Fashion Eyewear

ANSI Z87.1 Practice for Occupational and Educational Eye and Face Protectors

2.3 *Federal Standard*:

National Institute of Standards and Technology Special Technical Publication 374 Method for Determining the Resolving Power of Photographic Lenses⁴

3. Terminology

3.1 *Definitions of Terms Specific to This Standard*:

3.1.1 *binocular, adj*—relating to the field of view which is shared by both eyes simultaneously; also any simultaneous activity of the two eyes.

3.1.2 *central viewing zone, n*—that part of the eye of a protector, which has its center in line with the wearer's normal line of sight.

3.1.2.1 *Discussion*—The zone is circular in shape, and 40 mm in diameter. The center of the central viewing zone shall be the point of intersection of the line of sight with the lens as mounted on the CSA headform.⁵

3.1.3 *cleanable, n*—ability of a protective device to be made readily free of dirt or grime without being damaged during an appropriate cleaning process, such as the use of soap and water.

3.1.4 *coefficient of restitution, n*—fractional value representing the ratio of velocities before and after an impact.

3.1.5 *compression-deflection, n*—force required to compress a ball a given distance.

3.1.6 *coverage, n*—characteristic of a protective device that obstructs straight line paths that are coincident with the wearer's eyes.

3.1.7 *definition (optical), n*—characteristic of a lens that allows separate distinct points in close proximity to be discerned when looking through the lens.

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

⁴ Available from National Institute of Standards and Technology (NIST), 100 Bureau Dr., Stop 1070, Gaithersburg, MD 20899-1070, <http://www.nist.gov>.

⁵ Available from Canadian Standards Association (CSA), 5060 Spectrum Way, Mississauga, ON L4W 5N6, Canada, <http://www.csa.ca>.