

**STANDARD PERFORMANCE  
SPECIFICATION FOR HELMET MOUNTED  
POLO EYE PROTECTION**

**NOCSAE DOC.055-11m19**

Prepared By



**NATIONAL OPERATING COMMITTEE  
ON STANDARDS FOR ATHLETIC EQUIPMENT**

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## 1. Scope

- 1.1. This standard specification establishes performance requirements for helmet mounted polo eye protection. The requirements of this standard shall be subject to Level 3 compliance criteria unless otherwise stated herein.
- 1.2. **All testing and requirements of this standard specification must be in accordance with NOCSAE DOC.001 and NOCSAE DOC.021, except where modified herein.**
- 1.3. *This standard does not purport to address all of the safety problems, 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. STANDARD DROP TEST METHOD AND EQUIPMENT USED IN EVALUATING THE PERFORMANCE CHARACTERISTICS OF HEADGEAR/EQUIPMENT, NOCSAE DOC.001
- 2.2. STANDARD PROJECTILE IMPACT TEST METHOD AND EQUIPMENT USED IN EVALUATING THE PERFORMANCE CHARACTERISTICS OF PROTECTIVE HEADGEAR/PROJECTILES, NOCSAE DOC.021.

## 3. Test Sample Size

- 3.1. See Sections 6 and 11, NOCSAE DOC.001, for QC/QA protocol testing.
- 3.2. For any standalone test report; at least five (5) eye protectors of each model mounted onto helmets that meet the requirements of NOCSAE DOC. 050 and bear the NOCSAE logo, in each critical size must be tested.

## 4. Eye Protector Preparation

- 4.1. Eye protectors shall be tested complete, in the condition as offered for sale or use.
- 4.2. Eye protectors used for testing must be selected in a random manner.
- 4.3. Eye protectors that must be mounted to helmets of a given model with a size smaller than 6 5/8 **may** not fit the smallest NOCSAE headform. In that event, testing of that size is waived so long as the other sizes of that model have been tested and meet all requirements.
- 4.4. To obtain a reasonable fit (as determined by the test technician) for testing purposes, eye protectors that must be mounted to helmets larger than size 7 5/8 **may** require "shim" pads to be inserted between the largest NOCSAE headform and the interior of the helmet, opposite from the impact site.

## 5. Eye Protector Testing

- 5.1. The polo ball(s) used for these tests must meet polo specifications and be approved for use by the U.S. Polo Association. A new ball must be used on each model submitted for testing.
- 5.2. See Section 5, NOCSAE DOC.021.
- 5.3. Each eye protector to be tested shall be mounted on a polo helmet certified as meeting the NOCSAE standard according to the manufacturer's instructions. Eye protectors shall be impacted one time at each of these positions:
  - 5.3.1. Directly in front with the headform and helmet in an upright (vertical) position. [The barrel (line of ball travel) shall be perpendicular to the Coronal plane].
  - 5.3.2. With the headform and helmet in an upright (vertical) position and rotated away from the Midsagittal plane at a 45° angle from the direction of impact.
  - 5.3.3. Random location: The headform may be located in any manner that allows the impact point to be within the "no contact area" as defined in Figure 1 attached. The pointer or other targeting means can be set within, or to any edge of, the "no contact" area. The center of ball contact must be at the edge of, or within the "no contact" area.
- 5.4. The impacts shall be aimed at the center of the widest opening in the eye protector while in the chosen position.
- 5.5. A different eye protector is to be used for each test position at each temperature (five eye protectors are needed for the complete test series). Each eye protector will be used for different impacts (directed at the largest opening for each chosen position).
- 5.6. The head model will be positioned with its impact site located within 24 inches (610 mm) from the end of the muzzle (or from the point at which the ball is released).
- 5.7. Each submitted sample shall be impacted with the ball in accordance with Table 1 and as depicted in Figure 2.

**TABLE 1**

**LOCATION - MILES PER HOUR (m/sec)<sup>1</sup>**  
**(All speeds must be ± 3%)**

	<b>FRONT (90°)</b>	<b>AT A 45° ANGLE</b>	<b>RANDOM</b>
<b>Ambient Temperature</b>	90 (40.2)	90 (40.2)	90 (40.2)
<b>Low Temperature</b>	90 (40.2)	90 (40.2)	N/A

<sup>1</sup> The impact test is designed to approximate the impact of a direct perpendicular blow from a polo ball traveling at 90 MPH (40.2 m/s). These measurements have been confirmed by actual measurements taken in January 2001 whereby 100 used polo balls were hit from an offside forehand shot between the goal posts from 60 yards. The average speed of the horse was 12 MPH. The speed of the ball was at times in excess 90 MPH.

## 6. Test Requirements

- 6.1. Helmet repositioning during testing is anticipated. Any structural changes or other changes that take place during impact testing which result in un-restorable, loosening of the fit (see Section 20, NOCSAE DOC.001) shall be cause for failure. In the case of helmets “shimmed” as per section 4.5, the replacement or repositioning of shims is allowed.
- 6.2. When tested in accordance to section 5, all faceguards shall remain intact with no crazing, breaking or cracking, either in the material or at the testing points.
- 6.3. A passing helmet model is able to withstand all impacts and meets all other requirements when tested in accordance with this performance specification.
- 6.4. When tested in accordance to section 5, no contact to the ocular area is ever permitted. (See Figure 1).
  - 6.4.1. Verification of ball contact - For verification of ball or protector contact with the face, cover the ocular area from the frontal bone superiorly to the mandible inferiorly with Pressure Indicator paste. Contact of either ball or protector with any part of the face will leave paste at the point of contact and proof of contact on the headform. Inspect thoroughly both the ball and the protector to determine if they contain residue of paste. Also inspect the headform ocular area for evidence of contact.

## 7. Labels and Warnings

- 7.1. See Section 9, NOCSAE DOC.021 with the exception of sections 9.1.3, 9.2, 9.6 and 9.7.
- 7.2. The phrase, Manufacturer Certifies, “SEI Certified, Meets NOCSAE Standard®” Shall be permanently affixed to the eye protector.
- 7.3. Packaging and/or instructional literature for eye protectors shall be permanently and legibly labeled in a manner such that the following information can be easily read:
  - 7.3.1. A list of helmets certified as meeting the NOCSAE standard for Polo helmets, on which the eye protector has been tested and certified as meeting this Standard Performance Specification.
  - 7.3.2. **WARNING**

**DO NOT USE THIS FACEGUARD IF IT IS CRACKED OR DEFORMED OR IF ANY PART IS DETERIORATED. SEVERE HEAD OR NECK INJURY, INCLUDING PARALYSIS OR DEATH MAY OCCUR TO YOU DESPITE USING THIS FACEGUARD. NO FACEGUARD HELMET COMBINATION CAN PREVENT ALL HEAD INJURIES OR ANY NECK INJURIES, OR FACIAL INJURIES A PLAYER MIGHT RECEIVE WHILE PARTICIPATING IN POLO**

**THIS FACEGUARD DOES NOT COMPLY WITH NOCSAE REQUIREMENTS UNLESS IT IS ATTACHED TO A HELMET SPECIFICALLY LISTED BY THE MANUFACTURER AND WHICH BEARS THE NOCSAE POLO LOGO.**

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**LIMITED CONTACT/OCULAR AREA**

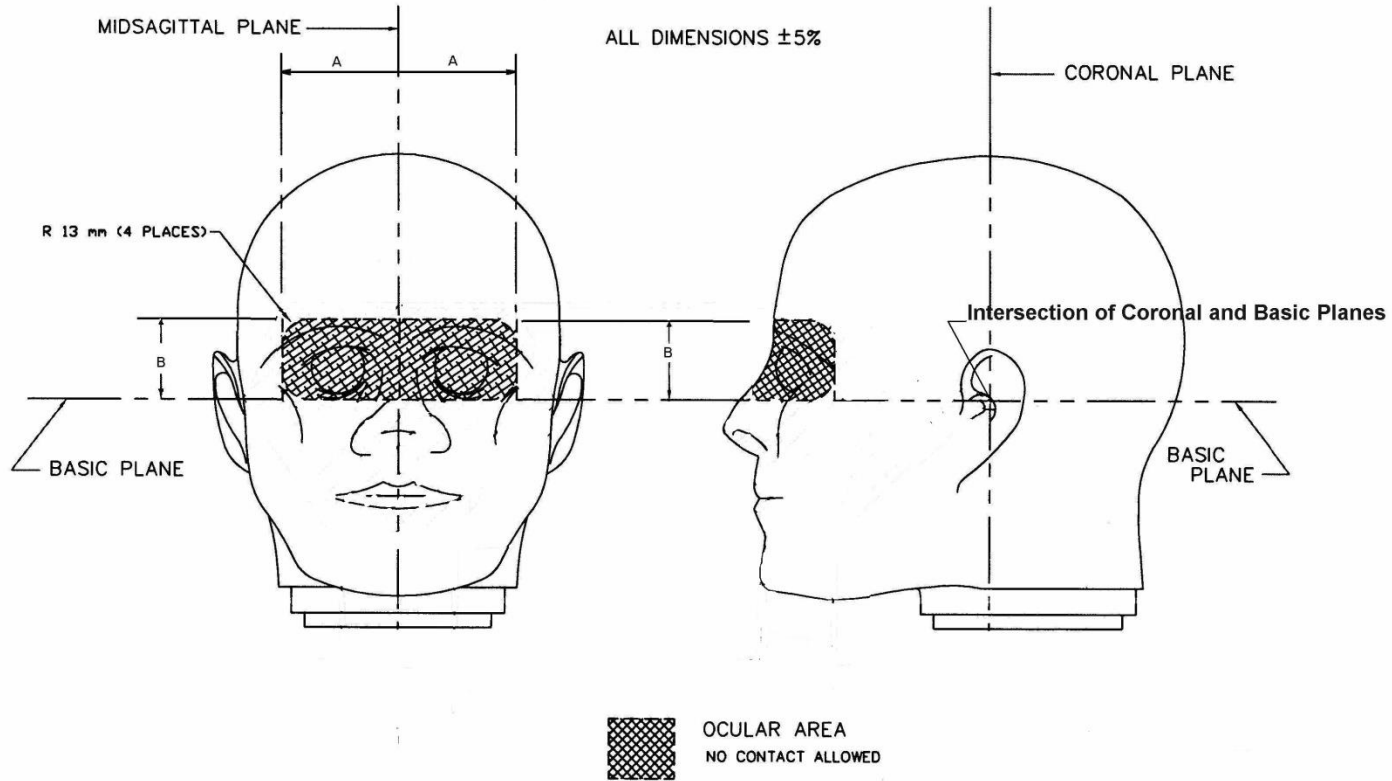
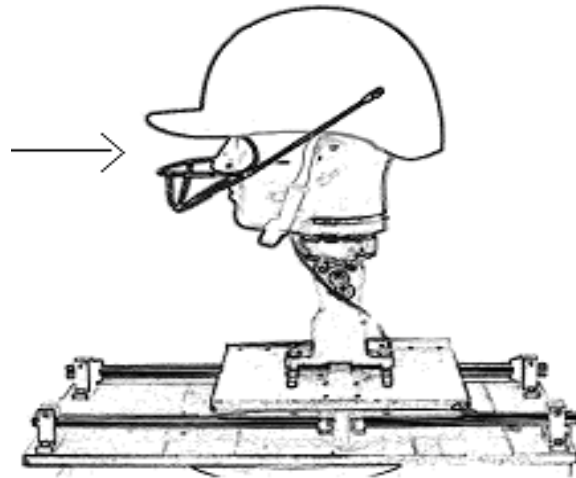


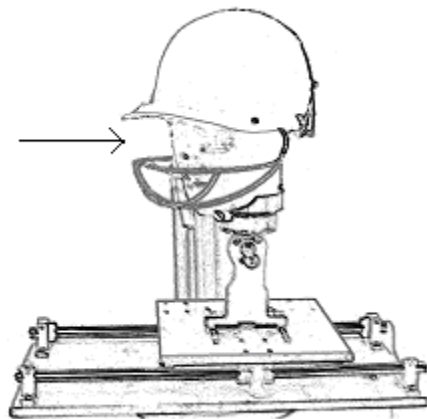
TABLE 2

Headform	Label	A	B
Small	Dimension, mm (in)	54 (2.113)	32 (1.259)
Medium	Dimension, mm (in)	56 (2.205)	35 (1.378)
Large	Dimension, mm (in)	62 (2.421)	39 (1.532)

Figure 1



**Front**



**At a 45**

**Figure 2**



### **JULY, 2004 MODIFICATIONS/REVISIONS**

- Added sunset clause

### **JUNE, 2005 MODIFICATIONS/REVISIONS**

- Modified labeling requirements
- Modified Figure 1 title correction
- Modified NOCSAE contact information
- Modified Note in section 6.7

### **FEBRUARY 2011, MODIFICATIONS/REVISIONS**

- **Revision-** Added dimensions for limited contact/ocular area for small and large headforms to Figure 1.
- Moved test requirements to section 8. Clarified test requirements.

### **MAY 2012 MODIFICATIONS/REVISIONS**

- Clarified section 3 for standalone test report
- Moved requirements to section 4 from section 3 for clarity

### **OCTOBER 2014 MODIFICATIONS/REVISIONS**

- Updated document to include level of compliance requirements.
- Added Date specification becomes effective
- Updated title name of NOCSAE DOC. 001
- Added SEI Certification NOCSAE Logo to Section 7, "Labels and Warnings"

### **JUNE 2015 MODIFICATIONS/REVISIONS**

- Updated NOCSAE seal/logo artwork

### **DECEMBER 2019 MODIFICATIONS/REVISIONS**

- Changed references to face protector to eye protector