



Standard Specification for Body Protectors Used in Horse Sports and Horseback Riding¹

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INTRODUCTION

Horse sports and horseback riding are sports with intrinsic hazards. It is recognized that it is not possible to write a body protector performance standard that will result in products that can protect against injury or death in all accidents. It is also recognized that serious injury or death can result from both low-energy and high-energy impacts, even when body protectors are worn. It is further recognized that protective body protectors must be acceptable to the user and to the regulating associations or agencies requiring their use. Acknowledging these limitations, this specification was developed using resources in medical, scientific, engineering, human factors, and biomedical fields.

This specification incorporates many aspects of other recognized body protector performance standards. This specification draws from work done by others where appropriate for this specification. These standards may be referenced. It should be noted that this specification specifies a laboratory test of a completed body protector's ability to reduce impacts.

1. Scope

1.1 This specification covers minimum performance criteria and describes test methods for body protectors for use in horse sports and horseback riding.

1.2 It is not the intention of this specification to bar from consideration materials of improved quality or performance not known at the time of development of this specification.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.4 *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

F1045 Performance Specification for Ice Hockey Helmets

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 **F08.55** on Body Padding.

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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.

F1446 Test Methods for Equipment and Procedures Used in Evaluating the Performance Characteristics of Protective Headgear

2.2 *BETA Standard:*³

BETA 1.24.4.95 Standard for Horse Riders' Body and Shoulder Protectors

2.3 *National Institute of Justice Standard:*⁴

NIJS 0101.03 Ballistic Resistance of Police Body Armor

2.4 *SAE Standard:*⁵

SAE J211 Recommended Practice for Instrumentation for Impact Tests—Requirements for Channel Class 1000

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:* In addition to terms defined in Test Methods **F1446**, the following terms are specific to this specification:

3.1.1 *backing material*—block of non-hardening, oil-based modeling clay in contact with the back of the body protective test specimen during impact deformation testing.⁶

³ Available from the British Equestrian Trade Association Ltd., Wrotham Grange, Bramham, Nr. Wetherby, Yorkshire, LS23 6LY.

⁴ Available from National Institute of Justice (NIJ), 810 7th St., NW, Washington, DC 20531, <http://www.ojp.usdoj.gov/nij>.

⁵ Available from SAE International (SAE), 400 Commonwealth Dr., Warrendale, PA 15096-0001, <http://www.sae.org>.

⁶ A backing material found to be suitable is Roma Plastilina No. 1 modeling clay as defined in NIJS 0101.03.