Designation: ~~F1492 – 15~~ F1492 – 22

An American National Standard

Standard Specification for Helmets Used in Skateboarding and Trick Roller Skating[1]

This standard is issued under the fixed designation F1492; 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 performance requirements for helmets to be used in the activities of skateboarding and trick roller skating.

1.2 All testing and requirements of this specification shall be in accordance with Test Methods F1446, except where noted herein.

1.3 *Partial utilization of this specification is prohibited. Any statement of compliance with this specification shall be a certification that the headgear meets all of the requirements of the specification in their entirety. A headgear that fails to meet any one of the requirements of this specification is considered to have failed the specification, and shall not be sold with any indication that it meets parts of the specification.*

1.4 This standard is subject to revision at any time by ASTM. It must be reviewed every five years and if not revised either reapproved or withdrawn. References to the standard must include the version date. No references to a version that has been replaced or withdrawn shall be placed on any product or its packaging manufactured more than 24 months after the effective revision or withdrawal date. Go to astm.org to verify the latest version of this standard.

1.5 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.6 *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~~ safety, health, and ~~health~~environmental practices and determine the applicability of regulatory limitations prior to use.*

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

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

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

[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 F08.53 on Headgear and Helmets.

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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.

3.1.1 *trick roller-skating, n*—aggressive roller skating using quads or in-lines and involving such things as jumping, sliding sideways, or skating on ramps or stairs.

3.1.2 *in-lines, n*—roller skates with all wheels on each skate arranged along a single longitudinal line.

3.1.3 *quads, n*—roller skates with four wheels on each skate arranged in a rectangular pattern.

4. Labels and Warnings

4.1 Shall meet the requirements of Test Methods F1446.

4.2 Shall have the words "For skateboarding or trick roller skating" inscribed on one of the interior permanent labels.

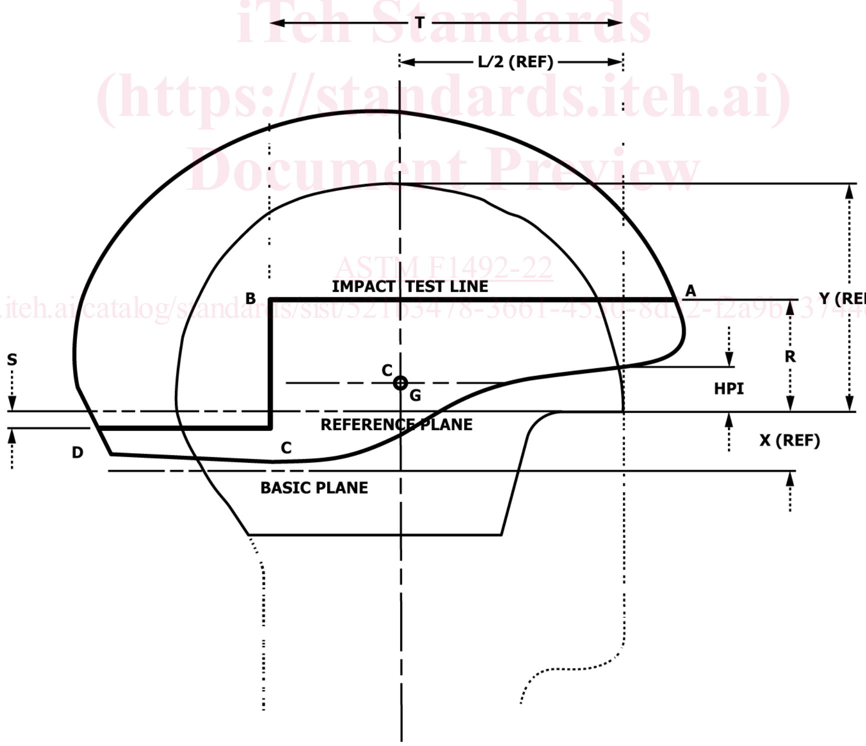
4.3 Headgear that complies with this and other standards may proclaim uses as certified by the manufacturer.

5. Marking the Test Line

5.1 The test line is shown in Fig. 1 and shall be marked in accordance with Test Methods F1446.

6. Conditioning and Number of Samples

6.1 Shall be in accordance with Test Methods F1446.



NOTE 1—The center of impact can be anywhere on or above the test line.

Headform Size	Dimension X	L/2	Y	R	S	T
A	24.0	88.0	89.7	47.5	7.0	142.0
C	25.0	91.0	92.7	48.5	7.0	146.5
E	26.0	94.5	96.0	49.0	8.0	151.0
J	27.5	101.0	102.5	50.0	8.0	160.0
M	29.0	106.0	107.0	52.0	8.0	166.0
O	30.0	108.5	110.0	53.0	9.0	170.0

FIG. 1 Marking the Test Line ABCD

6.2 The test requires a minimum of four samples of each shell/liner combination.

7. Retention System Testing

7.1 Retention system tests shall be performed before impact testing.

7.2 The ambient helmet shall be subjected to the Roll-Off Test of Test Methods F1446 using a 4 kg drop mass from a height of 0.6 m.

7.3 The retention system shall remain intact and the helmet shall remain on the headform.

7.4 The hot, cold, and wet helmets shall be subjected to the Dynamic Strength Retention Test of Test Methods F1446 using a 4 kg drop mass from a height of 0.6 m.

7.5 The retention system shall remain intact without elongating more than 30 mm.

8. Impact Sites and Projections

8.1 Impact sites are described in Test Methods F1446.

8.2 *Projections*—Any unfaired projection extending more than 7 mm from the helmet's outer surface shall break away or collapse when impacted with forces equivalent to those produced by applicable impact-attenuation tests in Section 10. There shall be no fixture on the helmet's inner surface projecting more than 2 mm into the helmet interior except occipital stabilizers and foam fit pads.

9. Impacting Schedule

9.1 All impacting shall be performed in accordance with Test Methods F1446, except as noted in 9.4, using the variable mass drop assembly configuration.

9.2 The test anvils can be oriented in any horizontal, centered position.

9.3 At least one of the four impact sites (as described in Test Methods F1446) on the ambient conditioned helmet will be impacted three consecutive times with the flat anvil at the same test location to evaluate the helmet's ability to withstand multiple impacts. A time interval of 90 ± 30 s must elapse between impacts directed at the same location on the same helmet.

9.4 Each of the three remaining helmets (one for each remaining environment), will be impacted as described in Test Methods F1446.

10. Impact Testing

10.1 Retention system testing shall be completed prior to impact testing.

10.2 The helmet can be impacted such that the theoretical center of impact described in Test Methods F1446 is anywhere on or above the test line described in Fig. 1.

10.3 Anvils to be used are the flat, cylindrical, and triangular hazard anvils from Test Methods F1446.

10.4 The helmet shall be dropped onto each anvil to achieve an impact velocity of 4.57 m/s, +5 %, –0 % (corresponding to a theoretical drop height of 1.0 m).

10.5 Each helmet shall be given two flat anvil impacts and one each cylindrical and triangular hazard anvil impact in any sequence.