



Designation: F3103 – 14 (Reapproved 2019)

Standard Specification for Testing Off-Road Motorcycle and ATV Helmets¹

This standard is issued under the fixed designation F3103; 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 used by off-road motorcycle and All-Terrain Vehicle (ATV) riders.

1.2 Compliance with the federally mandated FMVSS No. 218 shall be documented as part of compliance with this ASTM standard.

1.3 This specification provides additional performance requirements including positional stability and performance criteria for chin bars on full-facial coverage helmets if the helmet is equipped with a chin bar.

1.4 This standard does not require that helmets provide full facial coverage.

1.5 This is a performance specification and is not intended to restrict design.

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

1.7 Partial utilization of this standard is prohibited. Any statement of compliance with this specification must be a certification that the product meets all of the requirements of this specification in its entirety. A product that fails to meet any one of the requirements of this specification is considered to have failed this standard, and should not be sold with any indication that it meets parts of this standard.

1.8 Headgear designed to comply with this and other standards may proclaim uses as certified by the manufacturer.

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

1.10 The following safety caveat applies to the chemical, mechanical, or physical, or a combination thereof, test methods described herein and is meant specifically for those performing the tests (in an effort to provide them with notice to take the

appropriate precautions when conducting the tests): *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.11 *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

F2220 Specification for Headforms

F2727 Guide for Manufacturers for Labeling Headgear Products

2.2 Other Standards:

UNI EN 960 Headforms for Use in the Testing of Protective Helmets

Federal Motor Vehicle Safety Standard No. 218 Motorcycle Helmets, effective May 13, 2013

Laboratory Test Procedure for FMVSS No. 218: TP-218-07 effective May 13, 2013

American National Standard for Four Wheel All-Terrain Vehicles, ANSI SVIA 1-2010

3. Terminology

3.1 *Definitions*—Off-road motorcycle and ATV use includes, but is not limited to, motocross, supercross, enduro, endurocross, arenacross, flat-track, observed trials, hill-climbing, ice-racing, and non-competitive uses such as trail, cross-country, desert, sand dune riding, etc.

3.2 *All-Terrain Vehicle (ATV), n*—a motorized off-highway vehicle designed to travel on four low pressure tires, having a

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.