Designation: F3351 – 19ε1

Standard Test Method for Playground Surface Impact Testing in Laboratory at Specified Test Height[1]

This standard is issued under the fixed designation F3351; 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.

ε[1] NOTE—Corrected 4.2 and 6.1 editorially in June 2020.

INTRODUCTION

This test method allows for laboratory testing at various, nominal values in a laboratory at a drop height lower than the critical fall height (CFH) as determined in Specification F1292 and utilizing the three temperature test method and device stipulated in Test Method F355.

Owner/operators may require their surface systems to perform better at initial installation with much lower HIC and Gmax test results than the critical fall height limit.

The owner operator may choose to confirm the performance of the specified height report by performing a test in the field to Test Method F3313 after the surface has been installed and periodically thereafter as the surfaces ages.

1. Scope

1.1 This test method covers all playground surfaces to be tested in a laboratory setting at a specific drop height established by the manufacturer of the playground surface to determine shock absorption properties at the specified height above the surface and to evaluate surfaces based on their Gmax and HIC values described in Specification F1292.

NOTE 1—This test method is not intended to replace Specification F1292 for critical fall height (CFH) testing but to provide more information to either the manufacturer of the surface or the owner/operator purchasing the surface.

NOTE 2—This test method informs the owner/operator of the impact attenuating performance of the surfacing system at the specified height used in the test.

1.2 This test method is specific to surfacing used in conjunction with playground equipment, such as that described in Specifications F1148, F1487, F1918, and CSA Z614.

1.3 *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.*

1.4 *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]

F355 Test Method for Impact Attenuation of Playing Surface Systems, Other Protective Sport Systems, and Materials Used for Athletics, Recreation and Play

F1148 Consumer Safety Performance Specification for Home Playground Equipment

F1292 Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment

F1487 Consumer Safety Performance Specification for Playground Equipment for Public Use

F1918 Safety Performance Specification for Soft Contained Play Equipment

F3313 Test Method for Determining Impact Attenuation of Playground Surfaces Within the Use Zone of Playground Equipment as Tested in the Field

2.2 *CSA Standard:*[3]

CSA Z614 Children's playspaces and equipment

[1] This test method is under the jurisdiction of ASTM Committee F08 on Sports Equipment, Playing Surfaces, and Facilities and is the direct responsibility of Subcommittee F08.63 on Playground Surfacing Systems.

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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] Available from Canadian Standards Association (CSA), 178 Rexdale Blvd., Toronto, ON M9W 1R3, Canada, http://www.csagroup.org.