Designation: F2765 – 14

An American National Standard

Standard Specification for Total Lead Content in Synthetic Turf Fibers[1]

This standard is issued under the fixed designation F2765; 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 applies to the maximum content of lead in fibers used in synthetic turf.

1.1.1 This specification outlines a test method for sample preparation and a test method for analyzing the total lead content in synthetic turf fibers.

1.1.2 This specification outlines guidelines for reporting total lead content in synthetic turf fibers.

1.2 This specification applies only to synthetic turf fibers manufactured after Sept. 1, 2009.

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

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]

E1613 Test Method for Determination of Lead by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES), Flame Atomic Absorption Spectrometry (FAAS), or Graphite Furnace Atomic Absorption Spectrometry (GFAAS) Techniques

2.2 *ISO/IEC Standard:*[3]

ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories

2.3 *U.S. EPA Standards:*[4]

EPA Method 3052 Microwave Assisted Acid Digestion of Siliceous and Organically Based Matrices - Modified, SW–846, Test Methods for Evaluating Solid Waste

3. Terminology

3.1 *Definitions:*

3.1.1 *synthetic turf fiber, n*—extruded fiber used to simulate grass blades in a tufted, knitted, or woven turf fabric.

3.1.2 *total lead content, n*—quantity of lead in all forms measured by appropriate analytical technique and reported as mg/kg (ppm).

4. Acceptable Level

4.1 A representative sample of fiber shall be tested by the test method(s) described in Section 5 of this specification. The total lead content measured shall be less than 100 mg/kg (ppm).

4.2 Synthetic turf fibers shall be tested at such quantity intervals as to ensure continuing compliance with the requirement in 4.1.

5. Test Methods

5.1 *Laboratory Qualification*—The testing shall be conducted by an ISO/IEC 17025 accredited environmental laboratory.

5.2 *Preparation of the Sample*—Prepare sample(s) as outlined in EPA Method 3052 with the temperature modified from 180 ± 5°C to 210 ± 10°C.

5.3 *Analysis of Sample:*

5.3.1 Analyze sample(s) prepared in 5.2 for lead using inductively coupled plasma-atomic emission spectroscopy [ICP-AES] or atomic absorption spectrometry (AAS) as outlined in Test Method E1613.

5.3.2 Report total lead content as mg/kg (ppm).

6. Report

6.1 Record the following information:

6.1.1 Fiber identification, such as lot and color numbers.

[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 F08.65 on Artificial Turf Surfaces and Systems.

Current edition approved Sept. 1, 2014. Published October 2014. Originally approved in 2009. Last previous edition approved in 2009 as F2765 – 09. DOI: 10.1520/F2765-14.

[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 American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

[4] Available from United States Environmental Protection Agency (EPA), Ariel Rios Bldg., 1200 Pennsylvania Ave., NW, Washington, DC 20460, http://www.epa.gov/waste/hazard/testmethods/index.htm.

6.1.2 Date sampled,
6.1.3 Method used,
6.1.4 Date tested, and
6.1.5 Total lead content (mg/kg or ppm).

7. Keywords

7.1 lead; synthetic turf; synthetic turf fibers

APPENDIX

(Nonmandatory Information)

X1. APPENDIX

X1.1 According to the U.S. Consumer Product Safety Commission in a release dated July 30, 2008 from the Office of Information and Public Affairs: The U.S. Consumer Product Safety Commission (CPSC) staff released its evaluation of various synthetic athletic fields. The evaluation concludes that young children are not at risk from exposure to lead in these fields.