



Designation: D6545 – 22

Standard Test Method for Flammability of Textiles Used in Children's Sleepwear¹

This standard is issued under the fixed designation D6545; 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 test method evaluates the relative flammability of textiles and garments intended for use in children's sleepwear. The procedures of this test method follow testing and laundering procedures used to evaluate the flammability of children's sleepwear contained in U.S. Federal Regulations 16 CFR 1615 and 1616.

1.2 A textile used in children's sleepwear must be tested in its original state and after 50 laundering and drying cycles to assess the flame resistance of the textile relative to its use life.

1.3 This method is identical to the method outlined in the regulations 16 CFR 1615 or 1616. The regulation includes additional information such as sampling plans, record keeping requirements, and interpretations for compliance applicable to children's sleepwear. Please consult 16 CFR 1615 and 1616 for these operations and interpretations.

1.4 The values stated in SI units are to be regarded as standard. The values given in parentheses after SI units are provided for information only and are not considered standard.

1.5 *This test method is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire hazard or fire risk assessment of the materials, products, or assemblies under actual fire conditions.*

1.6 *Fire testing is inherently hazardous. Adequate safeguards for personnel and property shall be employed in conducting these tests.*

1.7 *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 health practices and determines the applicability of regulatory limitations prior to use. Specific precautionary information is found in 8.5 and 9.5.*

1.8 *This international standard was developed in accordance with internationally recognized principles on standard-*

ization 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

D123 Terminology Relating to Textiles
D1230 Test Method for Flammability of Apparel Textiles
D4391 Terminology Relating to The Burning Behavior of Textiles
E176 Terminology of Fire Standards

2.2 AATCC Test Method:³

AATCC Manual of International Test Methods and Procedures
LPI Home Laundering: Machine Washing
M11 Glossary of AATCC Standard Terminology

2.3 Federal Standards and Regulations:

16 CFR Part 1610 Standard for the Flammability of Clothing Textiles⁴
16 CFR Part 1611 Vinyl Plastic Film⁴
16 CFR Part 1615 Standard for the Flammability of Children's Sleepwear: Sizes 0 through 6X⁴
16 CFR Part 1616 Standard for the Flammability of Children's Sleepwear: Sizes 7 through 14⁴
Department of Commerce Voluntary Product Standard, previously identified as Commercial Standard, CS 151-50 "Body Measurements for the Sizing of Apparel for Infants, Babies, Toddlers, and Children"⁵

2.4 ISO Standard:⁶

ISO 13943 Fire Safety — Vocabulary

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 Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Research Triangle Park, NC 27709-2215, <http://www.aatcc.org>. Reference from the 1970 edition of the manual.

⁴ Available from U.S. Government Publishing Office, 732 N. Capitol Street, NW, Washington, DC 20401, <http://www.gpo.gov>.

⁵ Available from National Technical Information Service (NTIS), 5301 Shawnee Rd., Alexandria, VA 22312, <http://www.ntis.gov>.

⁶ Available from International Organization for Standardization (ISO), ISO Central Secretariat, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, <http://www.iso.org>.

¹ This test method is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.52 on Flammability.

Current edition approved June 1, 2022. Published July 2022. Originally approved in 2000. Last previous edition approved in 2018 as D6545–18. DOI:10.1520/D6545-22.