



Standard Specification for Flame Resistant Rainwear for Protection Against Flame Hazards¹

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1. Scope

1.1 This specification establishes applicable test methods, minimum physical and thermal performance criteria, a suggested sizing guide, and suggested purchasing information for rainwear for use by workers who are potentially exposed to industrial hydrocarbon fires or other petrochemical fire hazards.

1.1.1 This specification does not apply to rainwear used for thermal electric arc flash hazards. Specification of rainwear for these electric arc flash hazards are addressed in Specification F1891.

1.2 The objective of this specification is to prescribe function and performance criteria for rainwear that meets a minimum level of thermal and physical performance when exposed to a laboratory-simulated fire exposure.

1.3 This specification is not intended to serve as a detailed manufacturing or purchasing specification, but can be referenced in purchase contracts to ensure that minimum performance requirements are met.

1.4 Controlled laboratory tests used to determine compliance with the performance requirements of this specification shall not be deemed as establishing performance levels for all situations to which wearers of this protective clothing are potentially exposed.

1.5 This specification does not attempt to establish in-service care and use of this flame resistant rainwear.

1.6 The values stated in SI units are to be regarded as standard. The values given in brackets are mathematical conversions to inch-pound or other units that are commonly used for thermal testing.

1.7 The following safety hazards caveat pertains to Sections 7 and 9 of this specification. *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

- D123 Terminology Relating to Textiles
- D751 Test Methods for Coated Fabrics
- D1117 Guide for Evaluating Nonwoven Fabrics (Withdrawn 2009)³
- D1388 Test Method for Stiffness of Fabrics
- D3393 Specification for Coated Fabrics—Waterproofness
- D3776 Test Methods for Mass Per Unit Area (Weight) of Fabric
- D3786 Test Method for Bursting Strength of Textile Fabrics—Diaphragm Bursting Strength Tester Method
- D4391 Terminology Relating to The Burning Behavior of Textiles
- D6413 Test Method for Flame Resistance of Textiles (Vertical Test)
- E96/E96M Test Methods for Water Vapor Transmission of Materials
- F1494 Terminology Relating to Protective Clothing
- F1891 Specification for Arc and Flame Resistant Rainwear
- F1930 Test Method for Evaluation of Flame Resistant Clothing for Protection Against Fire Simulations Using an Instrumented Manikin

2.2 Federal Specifications:⁴

- FTMS 191A, Method 5516
- FTMS CCC-T-191b, Method 5204

2.3 AATCC Standards:⁵

- AATCC 135 Dimensional Changes Automatic Home Laundering of Woven and Knitted Fabrics

¹ This specification is under the jurisdiction of ASTM Committee F23 on Personal Protective Clothing and Equipment and is the direct responsibility of Subcommittee F23.80 on Flame and Thermal.

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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 The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, <http://www.dodssp.daps.mil>.

⁵ Available from American Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Research Triangle Park, NC 27709, <http://www.aatcc.org>.