Designation: ~~D7268 – 14~~ D7268 – 23

Standard Performance Specification for Seamless Knit Garments Including Intimates and Swimwear[1]

This standard is issued under the fixed designation D7268; 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 the evaluation of specific performance characteristics of importance in seamless knit garments, including camisoles, panties, slips, girdles and swimwear.

1.2 The following safety hazards caveat pertains only to the test methods described in this performance 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,~~safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.3 *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 (See Note 1)

2.1 *ASTM Standards:*[2]

D123 Terminology Relating to Textiles
D629 Test Methods for Quantitative Analysis of Textiles
~~D1230~~D2594 Test Method for ~~Flammability of Apparel Textiles~~Stretch Properties of Knitted Fabrics Having Low Power
D2905 Practice for Statements on Number of Specimens for Textiles (Withdrawn 2008)[3]
~~D3107 Test Methods for Stretch Properties of Fabrics Woven from Stretch Yarns~~
D3136 Terminology Relating to Care Labeling for Apparel, Textile, Home Furnishing, and Leather Products (Withdrawn 2023)[3]
D3786 Test Method for Bursting Strength of Textile Fabrics—Diaphragm Bursting Strength Tester Method
~~D3787~~D6797 Test Method for Bursting Strength of ~~Textiles—Constant-Rate-of-Traverse (CRT)~~ Fabrics Constant-Rate-of-Extension (CRE) Ball Burst Test
D7022 Terminology Relating to Apparel (Withdrawn 2022)[3]

2.2 *AATCC Test Methods:*[4]

~~8~~TM8 Colorfastness to Crocking: AATCC Crockmeter Method
~~15~~TM15 Colorfastness to Perspiration
~~16~~TM16.3 Colorfastness to ~~Light~~ Light: Xenon Arc
~~20~~TM20 Fiber Analysis: Qualitative
~~20~~TM20 A Fiber Analysis: Quantitative
~~61~~TM61 Colorfastness to ~~Laundering, Home and Commercial:~~ Laundering: Accelerated
~~106~~TM106 Colorfastness to Water: Sea

[1] This specification is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.61 on Apparel.
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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 American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.

~~107~~TM107 Colorfastness to Water
~~116~~TM116 Colorfastness to Crocking: Rotary Vertical Crockmeter ~~Method~~
~~132~~TM132 Colorfastness to Drycleaning
~~150~~TM150 Dimensional Changes ~~in Automatic~~ of Garments after Home Laundering ~~of Garments~~
~~158~~TM158 Dimensional Changes on Drycleaning in Perchloroethylene: Machine ~~Method~~
~~162~~TM162 Colorfastness to Water: Chlorinated Pool
~~172~~TM172 Colorfastness to Non-Chlorine Bleach in Home Laundering
~~179~~TM179 Skewness Change in Fabric and Garment Twist Resulting from Automatic Home Laundering
~~188~~TM188 Colorfastness to Sodium Hypochlorite Bleach in Home Laundering
~~Evaluation Procedure 1~~EP1 Gray Scale for Color Change
~~Evaluation Procedure 2~~EP2 Gray Scale for Staining
~~Evaluation Procedure 8~~EP8 AATCC 9–Step Chromatic Transference Scale
~~Glossary~~M11 A Glossary for AATCC Standard Terminology
AATCC-ASTM TS-001 Quick Methods for Colorfastness to Chlorine and Non-Chlorine Bleach

NOTE 1—AATCC-ASTM TS-001 contains quick test methods for color change from chlorine and non-chlorine bleach. The methods have not been validated for verified. ~~Incase~~ In case of dispute use AATCC 172 and/or 188 for bleach test results.

2.3 *Federal Standards:*[5]
16 CFR 1610 Flammable Fabrics Act

NOTE 2—Reference to test methods in this specification give only the permanent part of the designation of ASTM, AATCC, or other test methods. The current editions of each test method cited shall prevail.

3. Terminology

3.1 For all terminology related to Apparel, see Terminology D7022.

3.2 The following terms are relevant to this standard: camisole, girdle, intimates, panties, seamless knit garment, slip, swimwear.

3.3 For definitions of all other textile terms see Terminology D123.

4. Significance and Use

4.1 Upon mutual agreement between the purchaser and the supplier, seamless knit garments intended for this end use should meet all of the requirements listed in Table 1 of this specification.

4.2 It is recognized that, for purposes of fashion or aesthetics, the ultimate consumer of articles made from these fabrics may find acceptable products that do not conform to all of the requirements listed in Table 1. Therefore, one or more of the requirements in Table 1 may be modified by mutual agreement between the purchaser and the supplier.

4.2.1 In such cases, any references to the specifications should specify that: “This product meets ASTM specifications XXXX except for the following characteristic(s).”

4.3 Where no pre-purchase agreement has been reached between the purchaser and supplier, and in case of controversy, the requirements listed in Table 1 are intended to be used as a guide only. As noted in 4.2, ultimate consumer demands dictate varying performance parameters for a particular product.

4.4 The uses and significance of particular properties and test methods are discussed in the appropriate sections of the specified test methods.

5. Sampling

5.1 *Acceptance Testing Lot*—Unless agreed otherwise, consider as a lot for acceptance testing all material of a single item as a single shipment.

[5] Available from Superintendent of Documents, Government Printing Office, Washington, DC 20402.

TABLE 1 Specification Requirements

Characteristic	Requirements		Section
Bursting Strength	<5 oz	30 lb/in^2	
Colorfastness			
Laundering[A]	Color Change	4.0 Min	7.2
	Staining	3.0 Min	
Drycleaning	Color change	4.0 Min	7.3
	Staining	3.0 Min	
Crocking[A]	Dry	4.0 Min	7.4
	Wet	3.0 Min	
Light Swimwear 40 AFU's	Color change		Grade 3.5 Min
Intimates 20 AFU's	Color change		Grade 3.5 Min
Perspiration[A]	Color change	4.5 Min	7.6
	Staining	3.5 Min	
Water [A]	Color change	4.5 Min	7.7
	Staining	3.5 Min	
Sea Water (Swimwear only)[A]	Color change	4.0 Min	7.8
Chlorinated Pool Water (Swimwear only)	Color change	4.0 Min	7.9
Bleach			7.10
Chlorine		Grade 4 Min	
Non-Chlorine		Grade 4 Min	
Dimensional Change			7.11
Laundering — Each direction		±5.0 % Max	
Drycleaning- Each direction		±3.0 % Max	
Stretch		Record Actual	7.12
Flammability		Class 1	7.13
Garment Twist		5 % max	7.14
Fiber Content	Blends	±3.0 % Max	7.15
	100 % Fibers	±0.0 % Max	

[A] See Note 4.

5.2 *Lot Samples and Laboratory Samples*—For acceptance testing, take lot samples and laboratory samples as directed by each of the applicable test methods.

5.3 *Specimens*—Take the number of specimens directed in each of the applicable test methods. Perform the tests on the product as it reaches the consumer. Any "partially finished" or "post-finish" fabrics should be processed in accordance with the fabric manufacturer's instructions.

5.3.1 If the applicable test method does not specify the number of specimens, use the procedures in Practice D2905 to determine the number of specimens per laboratory sample unit.

5.3.2 Use a reliable estimate of the variability of individual observations on similar materials in the user's laboratory, a 95% probability level, and an allowable difference of 5% of units and the average for the laboratory sampling unit.

6. Specification Requirements

6.1 The properties of seamless knit garments shall conform to the specification requirements of Table 1.

7. Test Methods (See Note 1)

7.1 *Bursting Strength*—Determine bursting strength of knit fabrics as directed in Test Method D3786 (preferred method) or Test Method ~~D3787~~D6797 if the fabric stretches beyond the maximum of machine capacity in Test Method D3786.

NOTE 3—The precision of the bursting strength testers has not been established and the results are not interchangeable. The methods are accordingly not recommended for acceptance testing unless preceded by an interlaboratory check in the laboratories of the purchaser and the supplier, using randomized replicate specimens of the material to be evaluated.

7.2 *Colorfastness to Laundering*—Determine the colorfastness to laundering as directed in AATCC ~~Test Method 61~~ TM61 or as otherwise agreed upon between purchaser and the supplier.

NOTE 4—It has been reported that the results for staining, obtained by standard AATCC Test Methods, on fabrics dyed to dark shades that contain a