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textiles

ACT Voluntary Performance Guidelines for Flammability and four aspects of fabric durability—Wet & Dry Crocking, Colorfastness to Light, Physical Properties, and Abrasion—make fabric specification easier.

To give architects, designers, and end-users a vast amount of performance information in a succinct visual way, ACT developed icons to indicate that a fabric meets or exceeds guideline requirements. Look for these Registered Certification Marks on ACT Member Company sampling to assure that the fabrics you specify perform up to contract standards and pass all applicable testing.

All ACT Voluntary Performance Guidelines cover woven and coated fabrics for indoor use. “Woven Fabrics” consist of two sets of yarns, warp and filling, formed by weaving, which is the process of interlacing these sets of yarns. “Coated Fabrics” typically include a fabric or similar substrate with one or more layers of a film-forming polymer such as vinyl or polyurethane on the wear surface of the fabric.

Test methods included in the Guidelines measure fabric performance under standard laboratory conditions and are intended to represent the most current test version. Note: Individual ACT Member product information may represent a different version of a test method depending on the date the product was introduced to market.

Important: These tests represent minimum requirements, which are subject to change without notice and may not reflect requirements or laws in all locations.

Flammability



The measurement of a fabric’s performance when it is exposed to specific sources of ignition.

Note: ACT guidelines specify different flammability tests dictated by the intended end use for the fabric.

Upholstery

California Technical Bulletin 117-2013 Section 1 – Pass

Direct Glue Wallcoverings and Adhered Panels

ASTM E84 (Adhered Mounting Method) – Class A or Class 1

Wrapped Wall Panels and Upholstered Walls

ASTM E84 (Unadhered Mounting Method) – Class A or Class 1

Panel System Furniture

Any one or combination of the following: UL recognized component under Office Panel Fabrics category, UL 1286 Listed, ASTM E84 (Adhered or Unadhered Mounting Method) – Class A or Class 1

Drapery

NFPA 701 Method 1 or 2 as appropriate – Pass



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Wet & Dry Crocking



Transfer of dye from the surface of a dyed or printed fabric onto another surface by rubbing.

Upholstery – Woven Fabrics

AATCC 8	Dry Crocking, Grade 4 minimum
	Wet Crocking, Grade 3 minimum

Upholstery – Coated Fabrics

AATCC 8	Dry Crocking, Grade 4 minimum
	Wet Crocking, Grade 4 minimum

Direct Glue Wallcoverings

AATCC 8	Dry Crocking, Grade 3 minimum
	Wet Crocking, Grade 3 minimum

Wrapped Panels and Upholstered Walls

AATCC 8	Dry Crocking, Grade 3 minimum
	Wet Crocking, Grade 3 minimum

Drapery

AATCC 8 (Solids)	Dry Crocking, Grade 3 minimum
	Wet Crocking, Grade 3 minimum
AATCC 116 (Prints)	Dry Crocking, Grade 3 minimum
	Wet Crocking, Grade 3 minimum



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Colorfastness to Light



A material's degree of resistance to the fading effect of light.

Upholstery – Woven Fabrics

AATCC 16 Option 1 or 3	Grade 4 minimum at 40 hours*
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Upholstery – Coated Fabrics

AATCC 16 Option 1 or 3	Grade 4 minimum at 200 hours*
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Or

ASTM D4329	No appreciable color change at 150 hours*
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Direct Glue Wallcoverings

AATCC 16 Option 1 or 3	Grade 4 minimum at 40 hours*
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Wrapped Panels and Upholstered Walls

AATCC 16 Option 1 or 3	Grade 4 minimum at 40 hours*
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Drapery

AATCC 16 Option 1 or 3	Grade 4 minimum at 60 hours*
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**Note: There is no direct correlation between the numbers of testing hours and hours of service in the field.*

Physical Properties



Key factors in assessing overall durability of a fabric vary depending on the fabric construction.

Upholstery – Woven Fabrics

Pilling

ASTM D3511 (Brush Pill), Class 3 minimum

Or

ASTM D4970, (Martindale Tester), Class 3 minimum

Pilling is the formation of fuzzy balls of fiber on the surface of a fabric that remain attached to the fabric.

Breaking Strength

ASTM D5034 (Grab Test), 50 lbs. minimum in warp and weft

Breaking strength is the measurement of stress exerted to pull a fabric apart under tension.

Seam Slippage

ASTM D4034, 25 lbs. minimum in warp and weft

Seam Slippage is the movement of yarns in a fabric that occurs when it is pulled apart at a seam.

Upholstery – Coated Fabrics

Adhesion of Coating

ASTM D751 Sections 45-48, 3 lbf/in minimum

Adhesion of coating is the measurement of the force required to separate the coatings from the substrate.

Tear Strength

ASTM D2261 (Tongue Tear) – Knits & Woven Substrates, 4 x 4 lbs

ASTM D5733 (Trap Tear) – Nonwoven Substrates & Nonwoven Composites, 15 x 15 lbs

Tear Strength is the measurement of stress exerted to rip the fabric under tension.

Hydrolysis Resistance – Applicable to Polyurethanes Only

ISO 1419 (Tropical Test Method C), 5 weeks

Visual Evaluation for no cracking, peeling or delamination

Hydrolysis resistance is the evaluation of a polyurethane fabric's ability to withstand exposure to extended periods of heat and humidity.

Note: There is no direct correlation of testing weeks to years of service in the field.

Stretch & Set

ACT has chosen not to establish a minimum requirement for this performance characteristic since the ability of a fabric to return to its initial state is strongly impacted by factors that are attributed to furniture construction and fabrication such as the density of foam. The SAE J855 test can be used to evaluate the stretch and set of a coated fabric; however, ACT suggests that you consult with both your fabric supplier and furniture manufacturer to determine if there are any potential issues.

Wrapped Panels and Upholstered Walls

Breaking Strength

ASTM D5034 (Grab Test), 35 lbs. minimum in warp and weft

Drapery

Seam Slippage

ASTM D434 for fabrics over 6 oz./sq. yard, 25 lbs. minimum in warp and weft

Abrasion

The surface wear of a fabric caused by friction.



Low Traffic /
Private Spaces –
Woven Upholstery Fabrics

Low Traffic / Private Spaces – Woven Upholstery Fabrics

ASTM D4157 (ACT approved #10 Cotton Duck)
15,000 double rubs Wyzenbeek method

ASTM D4966 (12 KPa pressure)
20,000 cycles Martindale method



High Traffic /
Public Spaces –
Woven Upholstery Fabrics

High Traffic / Public Spaces – Woven Upholstery Fabrics

ASTM D4157 (ACT approved #10 Cotton Duck)
30,000 double rubs Wyzenbeek method

ASTM D4966 (12 KPa pressure)
40,000 cycles Martindale method

High Traffic /
Public Spaces –
Coated Upholstery Fabrics

High Traffic / Public Spaces – Coated Upholstery Fabrics

ASTM D4157 (ACT approved #10 Cotton Duck or Wire Screen)
50,000 double rubs Wyzenbeek method

Print Retention – Applicable for Printed Coated Upholstery Fabrics

ASTM D3389 (modified to evaluate visual determination of print loss), Rating of 3 or higher*
H-18 Wheel, 250 grams, 250 cycles Taber Tester method

*Using the ACT photographic scale of approved replicas

Notes:

ACT studies indicate that results of multiple abrasion tests performed on some woven fabric structures may vary significantly – as much as 60 percent or more.

Double rubs exceeding 100,000 are not meaningful in providing additional value in use and not predictive of significant extension of a fabric's service life.

There is no correlation between Wyzenbeek and Martindale results.

For more information please refer to abrasion white papers on the ACT website:

<http://www.contracttextiles.org/index.php?page=research>



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Whenever appropriate, specifiers and end users should seek the advice of professionals or other knowledgeable persons to ascertain whether a product will in fact comply with applicable Laws.

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It is the responsibility of the contract textile vendor and/or the manufacturer (not ACT) to determine in all instances whether or not a textile meets each of the Standards to which a particular Mark is referenced.

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