



*NSF International Standard /
American National Standard*

NSF/ANSI 140 - 2010

Sustainability Assessment for Carpet



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for Sustainability —

Sustainability assessment for carpet

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Foreword²

This American National Standard, NSF/ANSI 140 Sustainability Assessment for Carpet Standard, has been developed as part of the ongoing efforts of a number of interested parties to document and improve the sustainability profile of carpet and rug products using established and/or advanced scientific principles, practices, materials, and standards. Stakeholders involved in developing the Standard included carpet and rug manufacturers, end users such as interior design professionals, state agencies responsible for environmentally preferable product procurement practices, academics, and non-governmental organizations.

The purpose of the Sustainability Assessment for Carpet Standard is to establish consistent requirements for sustainable carpet products. These requirements are intended to form the basis of conformity assessment programs, such as third-party certification or registration.

The Sustainability Assessment for Carpet Standard has been designed, in part, to satisfy the following criteria:

- Demonstrate how carpet and rug products can conform to the environmental, economic, and social principles of sustainability throughout the supply chain.
- Demonstrate conformance with ISO Type 1 (ISO 14024) and Type 2 (ISO 14021) environmental labelling and declaration requirements.
- Demonstrate conformance with the Federal Trade Commission (FTC) Guides for the Use of Environmental Marketing Claims.
- Engender confidence in the various stakeholders (manufacturers, suppliers, regulators, and consumers) that products labeled with a third party certification mark consistently meet the requirements of this program.
- Encourage participation by all manufacturers of carpets and rugs to maximize impact reductions and enhance environmental accomplishments.

This Standard does not address carpet packaging or the adhesives and padding that may be used in the installation of carpet products. This Standard does not address the cleanability of carpet products. Consideration will be given to the inclusion of these components of carpeting systems in this Standard as sustainability criteria are developed for these adjunct products and processes.

This version contains the following revisions:

Issue 9

This ballot clarifies the definition of renewable energy in section 3.14. The intent was to make the definition in the standard congruent with the Green-e certified definition but without requiring that the particular source actually be accredited by this organization.

Issue 10

This ballot added a Table titled 9.2A – Performance Testing for Wool Rich Carpet to the standard. This table includes carpet performance testing and requirements to comply with the performance durability pre-requisite and ensure that the carpet product is properly selected for the intended use environment.

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These tried and tested standards also cover Residential Carpet Performance for wool rich carpets. Wool rich carpets are defined as those with at least 80% wool pile.

Issue 11

The purpose of this ballot was to allow 24 hours test results from the Carpet and Rug Institute's Green Label Plus program for carpet to be used to meet the requirements of section 6.3.5.1 Minimization of Indoor Formaldehyde Emissions. The formaldehyde concentration value was harmonized with *Section 9 of CA/DHS/EHLB/R-174 (Standard Practice, 2004 version)* at $16 \mu\text{g}/\text{m}^3$ at 24 h to ensure that formaldehyde emissions would not exceed the 1/2 CREL of $4.5 \mu\text{g}/\text{m}^3$ after 10-d conditioning and at 96 h.

Issue 14

The purpose of this ballot was to add the interpretation provided on NSF/ANSI 140 2007e related to section 7.2.3 Supplier's use of renewable energy. As users started to implement NSF/ANSI 140 in the marketplace, questions were raised about the consistent application of the requirements of item 7.2.3 Supplier's use of renewable energy. This revision provides clarity to this question through an example and additional text.

Comments on this Standard should be sent to NSF International, Standards Department, P.O. Box 130140, Ann Arbor, Michigan 48113-0140, USA or to standards@nsf.org.

NSF/ANSI Standard for Sustainability —

Sustainability assessment for carpet

1 General

1.1 Purpose and goals

The purpose of this Standard is to provide a market-based definition for a path to sustainable carpet, to establish performance requirements for public health and environment, and to address the triple bottom line, economic-environmental-social, throughout the supply chain.

The goals of this Standard are to:

- increase the economic value of sustainable carpet throughout the supply chain by enhancing market demand for sustainable carpet products;
- provide information that enables specifiers to sort out the complex information on sustainability attributes;
- identify other consensus-based standards relevant to sustainable carpet;
- educate and instruct all stakeholders in the carpet supply chain; and
- encourage competition between manufacturers and their suppliers to seek out or develop environmentally preferable processes, practices, power sources, and materials.

This Standard is intended to help raw material suppliers, converters, manufacturers, and end-users. Adherence to this Standard and achievement of high levels of sustainable attribute performance can or should result in:

- credits from LEED (Leadership in Energy and Environmental Design) for Commercial Interiors, e.g., Indoor Environmental Quality credit 4.3, Materials and Resources credit 4, Innovation and Design credit 1);
- design innovation;
- product differentiation;
- improved customer satisfaction;
- product innovation;
- improved indoor air quality and lower emissions;
- ecological restoration;

- enhanced health and safety for workers and consumers; and
- measurable reductions in total environmental impact.

1.2 Scope

This Standard is intended to enable organizations throughout the carpet supply chain to apply performance requirements to achieve sustainable attributes and demonstrate compliance with levels of achievement through quantifiable metrics. The Standard is inclusive, is based on life cycle assessment (LCA) principles, and provides benchmarks for continuous improvement and innovation.

This Standard is intended to allow inclusive participation and encourage the progressive movement of the carpet industry toward sustainability. This Standard identifies requirements of sustainable attribute performance and three levels of achievement by which carpet materials and products can be measured with respect to specific attributes that indicate progress toward sustainability.

While this Standard can be used on any carpet product, it is intended to be used for evaluation of commercial carpet products by providing a product evaluation methodology that is additive to emerging commercial green building standards.

This Standard does not apply to the packaging of sustainable carpets or to the adhesive or padding products used in the installation of carpet products.

This Standard is voluntary, but emphasizes disclosure of information on both impacts and benefits of a carpet or carpet product from an environmental and sustainability perspective.

All products or processes can be found compliant to this Standard if they are able to achieve all prerequisites and score the minimum required for compliance as specified in 4.

2 Normative references and tools

The following documents contain provisions that, through reference, constitute provisions of this NSF/ANSI Standard. At the time this Standard was balloted, the editions listed below were valid. All documents are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the documents indicated below.

2.1 Normative references

American Association of Textile Chemists and Colorists (AATCC) Test Method 134-2006, Electrostatic Propensity of Carpets³

American Association of Textile Chemists and Colorists (AATCC) Test Method 16-2004 Colorfastness to Light³

ASTM International (ASTM) D5252-05, Standard Practice for the Operation of the Hexapod Drum Tester⁴

ASTM International (ASTM) D1335-05, Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings⁴

ASTM International (ASTM) D3936-05, Standard Test Method for Resistance to Delamination of the Secondary Backing of Pile Yarn Floor Covering⁴

³ <www.aatcc.org>

⁴ <www.astm.org>