BUSINESS + INSTITUTIONAL FURNITURE MANUFACTURERS ASSOCIATION

ANSI/BIFMA e3-2019
Furniture Sustainability Standard

Business & Institutional Furniture
Manufacturers Association/
American National Standard

Approved American National Standard
ANSI

Designated as an ANSI Standard e3-2019

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Contents

Foreword[1]

This standard was developed by the Joint Committee on BIFMA e3 Furniture Sustainability using the consensus process described by the American National Standards Institute. The Joint Committee was created by the Business and Institutional Furniture Manufacturers Association (BIFMA) and NSF International.

NSF and BIFMA developed this standard in order to provide the marketplace with a meaningful way to assess sustainability initiatives in the office furniture industry and help to distinguish environmentally preferable business and institutional furniture. The Standard is designed to allow for multiple levels of achievement and to provide an open alternative to proprietary protocols.

This standard takes into consideration principles of green chemistry that reduce or eliminate the use and generation of hazardous and polluting substances. It incentivizes the pursuit of increasingly more sustainable products through sustainable product and process design.

Credit assessment is based on primary data, secondary data and generally accepted reference sources. Manufacturing tolerances and batch to batch variation in material infeeds accrue to the final product and may result in variation in individual credit performance over time. For example, steel used in office furniture is generally accepted to be 25% recycle content; however, recycled content of steel can vary from 0% to 100% depending on the availability and quality of recycled content infeeds. While applicants strive for consistency, end users should be aware of potential variation in data collected due to batch to batch variation.

Weighting Methodology and Point Allocation

This standard seeks to promote increasingly more sustainable products by promoting the selection of responsible materials and considering manufacturing and human resource processes. Given the challenge of prioritizing social and environmental factors and the lack of generally accepted metrics for comparison (e.g. comparing energy reduction to safety performance), stakeholders applied a “reasonableness test” to determine which criteria should be worth a higher point value. For example:

- Credits aligned with current regulations receive less emphasis and points are awarded only for supplemental voluntary actions.
- Credits incentivizing development of standard industry data supporting a more comparative decision making process are awarded more points.
- Credits engaging the entire supply chain in transparent collaboration toward a more sustainable future are given the most points.

From this perspective, the “reasonableness test” always assumes that reducing environmental impact and promoting human and ecosystem benefit is good and building systems to achieve further reduction and more benefit is even better.

Changes in e3-2019

<u>Structure</u>

This version of the standard (the 5th ANSI version following e3-2010, e3-2011, e3-2012, and e3-2014) was developed in response to participant suggestions, stakeholder feedback, and industry recommendations, to provide additional guidance, and to enhance the educational value of the standard. There are 3 rather than 4 primary sections of this version of the standard. A combined “Materials” and “Energy” section is now

[1] The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI’s requirements for an ANS. Therefore, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the standard.

an “Environmental Impacts” section; the addition of “Wellness” into the “Health” section reflects the growing interest and concern for wellbeing in the workplace; and the “Social Impacts” section has been expanded.

There are more points available in this version, 111 as opposed to 100 that were available in e3-2014. Accordingly, the threshold needed to reach the second and third tiers of conformance to the standard have been increased. There are also more product points available in this version so the upper tiers require more of those as well.

Changes to the point thresholds for achieving the second and third conformance tiers have changed in this version of the standard. Past versions of the standard used threshold percentages based on the USGBC’s LEED Rating System threshold percentages. To achieve the second and third tiers of conformance, e3-2014 required that 50% and 70% of the points needed to be achieved. Stakeholders felt this is still appropriate, but have removed certain points from the total that the thresholds are based on due to the fact that not all product types are eligible for every credit.

Environmental Impacts

This section, combining credits on Materials, Energy, and Atmosphere in the previous versions of the standard, has been redesigned to better align with ISO Life cycle standards. The organizational boundary and methodology for recalculating baselines are modeled on World Resources Institute criteria.

New credits have been added to foster the collection of generic industry datasets that could serve as a baseline for comparing changes in the material and operating processes over time to demonstrate the effectiveness of the standard.

As the LEED Rating System continues to recognize BIFMA’s LEVEL® Certification Program, among other multi-attribute programs, through Pilot Credit 112 for “Certified Multi-attribute Products and Materials,” LCA impact categories have been expanded in this version of the standard to reflect the LEED language.

Health & Wellness Impacts

The Low Emitting Furniture credit (Credit 7.6.1) is now a prerequisite and all applicable office furniture products conforming to this standard meet the ANSI/BIFMA Standard for Formaldehyde and TVOC Emissions.

There is a new option or “pathway” for manufacturers to address chemicals in products. In addition to the prior process (Annex B), utilization of the GreenScreen® method for chemical hazard assessment, Cradle to Cradle Certified™ Material Health Assessment Methodology, or the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) are now alternative options. Annex B chemicals that have been added in this version are shown in bold in the Annex while those that have been deleted are listed at the end of the Annex.

New “Category Specific Advances” credits will allow a point for products that meet the dimensions and adjustment ranges as referenced in the BIFMA G1 Ergonomics Guideline; products that mitigate health risks through lighting solutions; and products that meet criteria mirroring the requirements of the Healthier Hospitals program.

Social Impacts

The Social Impacts section incorporates new credit opportunities related to community outreach and resiliency, the assessment of high risk suppliers, pursuing criteria of a Benefit Corporation, and further alignment with LEED language.

Summary

In addition to the specific changes noted above, many other minor modifications were made throughout the standard for consistency and clarity. These improvements have been made to increase the furniture standard's alignment with other leading programs. That harmonization is intended to assure that the BIFMA sustainability standard is relevant in the marketplace, complimentary with specification systems, and recommended by leading purchasing professionals around the world.

Financial support for development and maintenance of this ANSI Standard is underwritten by the Business and Institutional Furniture Manufacturers Association (BIFMA), the owner of the standard, with in-kind support from NSF International, the Standards Development Organization (SDO).

Suggestions for improvement of this standard are always welcome. This standard is maintained on a Continuous Maintenance schedule and can be opened for comment at any time. Comments should be sent to Chair, Joint Committee on BIFMA e3 Furniture Sustainability, NSF International Center for Sustainability Standards at ncss@nsf.org or P.O. Box 130140, Ann Arbor, Michigan 48113-0140, USA.

Business and Institutional Furniture Manufacturers Association (BIFMA)

BIFMA is the not-for-profit trade association for business and institutional furniture manufacturers. Since 1973, BIFMA has been the voice for the commercial furniture industry, serving member and non-member companies to promote meaningful, market-oriented improvements for all stakeholders. BIFMA sponsors development of safety, performance and sustainability standards used across the furniture industry. The association educates the stakeholder community on the importance and proper use of these standards. BIFMA also provides industry statistics and forecasts to members and the public, and advocates for regulatory conditions that enhance value and foster innovation.

NSF International

NSF International has been testing and certifying products for safety, health, and the environment for more than 65 years (www.nsf.org). As an independent, not-for-profit organization, NSF's mission is to protect public health and the environment through standards development, inspection, testing, and certification for the food, water, build/construction, retail, chemical, and health science industries. NSF Sustainability draws upon this expertise in standards development, product assurance and certification, advisory services and quality systems management to help companies green their products, operations, systems and supply chains.

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1 General

1.1 Purpose

The purpose of this voluntary standard is to establish performance criteria that address environmental and social aspects throughout the supply chain.

1.2 Scope

This standard provides a pathway towards sustainability by establishing measurable criteria for multiple levels of achievement and/or performance.

This standard is applicable to all business and institutional furniture; this includes but is not limited to moveable walls, systems furniture, case goods, tables, seating, and accessories. The standard is also applicable to assemblies and components manufactured by suppliers to furniture manufacturers.

2 Normative References

The following documents contain provisions that, through reference in this text, constitute provisions of this standard. At the time of publication, the indicated editions were valid. All standards are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the standards indicated below:

ANSI/BIFMA M7.1-2011 (R-2016). *Standard Test Method for Determining VOC Emissions from Office Furniture Systems, Components and Seating*[2]

ANSI/BIFMA X7.1-2011 (R-2016). *Standard for Formaldehyde and TVOC Emissions of Low Emitting Office Furniture and Seating*[2]

ASTM Test Method D6966 – 16. *Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis*[3]

BIFMA G1 *Ergonomics Guideline for Furniture Used in Office Work Spaces Designed for Computer Use*[4]

California Business and Professions Code. Section 19094[5]

California Health and Safety Code. Section 105440[6]

California Technical Bulletin 117-2013 — *Requirements, Test Procedure, and Apparatus for Testing the Smolder Resistance of Materials Used in Upholstered Furniture*[7]

California Public Resource Code PRC Division 30. Part 3. Chapter 12.3 42649.8[8]

[2] https://www.bifma.org/page/standardsoverview

[3] http://www.astm.org/Standards/D6866.html

[4] https://www.bifma.org/page/StandardsShortDesc

[5] www.californiabusinessprofessionscode:go0076z

[6] www.californiahealthandsafety.gov

[7] http://www.bearhfti.ca.gov/about_us/tb117_2013.pdf

[8] https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=42649.8.#