Indoor Air Quality Product Performance Standard for Building Interiors

Environmental Certification Services Division
SCS-EC10.3.2014

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Foreword

Since the last published version of this Indoor Air Quality Product Performance Standard for Building Interiors in May 2007, normative references have been updated and revised. In order to maintain the integrity and rigor of this Standard, this new version incorporates the most recent normative references used to establish the core Volatile Organic Compound (VOC) emission and VOC content requirements for the SCS Indoor Air Quality certification programs. Further revisions to the certification programs have evolved as a result of industry and stakeholder input and are set forth in this Standard.

The most significant changes to SCS EC10.2-2007 that have been incorporated into this Standard are the following:

1. Normative References updated to include ISO/IEC 17065:2012, USGBC LEED v4, SCAQMD Rule 1113 (September 2013), and international VOC content rules.

2. The SCS Indoor Advantage™ certification programs have been subdivided into the following: Indoor Advantage™ Gold – Building Materials, Indoor Advantage™ - Furniture, and Indoor Advantage™ Gold – Furniture.

3. Requirements for paints, coatings, adhesives, sealants and flooring products have been updated to reflect the USGBC LEED v4-Low emitting materials credit.

4. The Standard's language has been updated to describe "Representative Sample Selection" in Section 6.2.

5. The Standard's Quality Control documentation requirements have been updated to focus on only applicable documents for the scope of the Standard in Section 6.5.

6. The Standard's on-site audit requirements have been modified to program specific frequencies in Section 6.6.

7. Guidance for determining the modeling parameters for product types not specified in the Normative References has been added to the Standard in Section 6.8.

8. Section 6.9, Certification Documentation has been added to clearly detail the product conformance information required to be included within both the certificate and certification report.

9. Section 7, Eligibility and Conditions for Products Privately Labeled has been added to the Standard.

10. Normative appendices have been added to define program specific criteria.

11. Additional conformance criteria have been added for Paints, Coatings, Adhesives, Sealants and Insulation and is specified in the program specific appendices.

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Revision History

Table 1. History of Revisions and Amendments to SCS-EC10.X, Indoor Air Quality Performance

Date	Issue	Brief Summary of Revisions and Amendments
August 2004	SCS-EC10.1-2004	First publication of the standard.
May 2007	SCS-EC10.2-2007	Second version (EC-10.2) delineates the requirements of the two tiers on Indoor Advantage certification. In addition, it incorporates references to the emerging BIFMA Furniture Emissions Standards and corrects formatting inconsistencies and grammatical errors.
December 2008	Amendment 1	"Formaldehyde Free" certification requirements established.
February 2010	Amendment 2	Normative reference was revised. The CA Dept. of Health Services Standard Practice (CA/DHS/EHLB/R-174) was revised and changed to the CA Department of Public Health - CDPH/EHLB Standard Method v1.1.
April 2011	Amendment 3	Normative references were updated. The ANSI/BIFMA Furniture Emissions Standards were revised (M7.1-2011 and X7.1-2011).
November 2012	Amendment 4	Criteria updated to include credits from ANSI/BIFMA e3-2012: 7.6.1, 7.6.2, and 7.6.3.
February 2013	Amendment 5	Quality management system and manufacturing on-site audit evaluation requirements updated.
March 2014	DRAFT-SCS-EC10.3-2014	Revision to entire standard to incorporate prior amendments and other programmatic changes. Draft prepared for stakeholder and public comment.

Authorizing Manager: Managing Director, Environmental Certification Services

1.0 General Guidance

1.1 Purpose

This Standard allows manufacturers of building materials and furniture used in building interiors to communicate their product's indoor air quality performance through compliance to one of the following applicable certification programs:

- FloorScore®;
- SCS Indoor Advantage™ Gold – Building Materials;
- SCS Indoor Advantage™ – Furniture;
- SCS Indoor Advantage™ Gold – Furniture.

Certification through use of this science-based standard provides transparency and credibility for manufacturers making Indoor Air Quality claims. Purchasers and consumers can be assured that products labelled with the SCS certification marks are consistently meeting the performance requirements of this standard.

1.2 Scope

This Standard describes the requirements of Indoor Air Quality Performance claims by manufacturers of building materials and furniture products used in building interiors. This standard applies to any product or material belonging to a product category used within an indoor environment. This includes, but is not limited to, architectural coatings, paints, sealants, adhesives, wall coverings, floor coverings, ceiling tiles, wall paneling, and furniture components and systems used in public and commercial office buildings, schools, medical buildings, single-family residences and other building types.

This Standard applies to building products and furniture which are intended for long term installation and use. The standard addresses chronic inhalation exposures of building occupants to toxic, airborne organic chemicals.

1.3 Limitations

This Standard does not purport to address all of the safety, health, comfort (e.g., odor) and performance concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health and other performance conditions and to determine the applicability of regulatory limitations prior to use.

The standard does not address short term occupational exposures incurred during construction or renovation.

This Standard is voluntary. It is not intended to replace any legal or regulatory requirements that may be applicable to user operations.

The Standard does not address any environmental tradeoffs that may be associated with the life-cycle phases of the product(s). Therefore, there may be environmental tradeoffs associated with a certified entity and/or the product it produces.

2.0 Significance and Use

2.1 Manufacturers

This Standard is intended to be used by Manufacturers, including Original Equipment Manufacturers (OEM) that may be within the certification scope of the applicant, seeking third-party certification to verify conformance of selected products to the requirements within SCS EC10.3-2014.

The Standard is intended for Manufacturers seeking to determine that their supply chain products and material input comply with indoor air quality standards set forth within SCS EC10.3-2014.

2.2 The General Public

This Standard is intended to be used by consumers, product specifiers, designers, and purchasers seeking to ensure finished products conform to the requirements within SCS EC10.3-2014.

2.3 Private Labels and Branding

This Standard provides program guidance for use of private labels by both the company and OEM.

3.0 Terminology

3.1 Informative Use of Terms

In this Standard the following terms are used:

- “shall” indicates a requirement;
- “should” indicates a recommendation;
- “may” indicates a permission;
- “can” indicates a possibility or a capability.

3.2 Acronyms and Abbreviations

ANSI – American National Standards Institute
ARB – Air Resources Board, Cal/EPA
ASTM – American Society for Testing and Materials
BIFMA – Business and Institutional Furniture Manufacturers Association
CDPH – California Department of Public Health
CREL – Chronic Reference Exposure Level

EF – Emission factor
EHLB – Environmental Health Laboratory Branch
EPA – U.S. Environmental Protection Agency
HAP – Hazardous Air Pollutant
IAQ – Indoor air quality
IEQ – Indoor environmental quality
ISO – International Organization for Standardization
iVOC – Individual volatile organic compound
LEED – Leadership in Energy and Environmental Design
OEHHA – Office of Environmental Health Hazard Assessment, Cal/EPA
RFCI – Resilient Floor Covering Institute
SCAQMD – South Coast Air Quality Management District
TAC – Toxic Air Contaminant
TVOC – Total volatile organic compounds
USGBC – United States Green Building Council
VOC – Volatile Organic Compound

3.3 Definitions

Certification Assessment – Independent evaluation of a product claim using specific predetermined criteria and procedures with assurance of data reliability.

Certified Product - Finished product and raw materials, sub-assemblies, components and accessories for which a manufacturer is authorized to apply the SCS Certification Mark, as evidence that the product complies with the relevant certification program. Certified products are listed on the SCS website at http://www.scsglobalservices.com.

Chronic Reference Exposure Level (CREL) – Non-cancer chronic reference exposure level developed by Cal/EPA OEHHA. These are inhalation concentration to which the general population, including sensitive individuals, may be exposed for long periods (10 years or more) without likelihood of serious adverse systemic effects other than cancer.

FloorScore® – An indoor air quality certification of the Resilient Floor Covering Institute (RFCI), which was developed in collaboration with SCS and directly references this SCS-EC10 standard and is conducted under the auspices of the SCS Environmental Certification Services – FloorScore certification program. FloorScore products meet the emission requirements of CDPH/EHLB Standard Method V1.1 and may contribute towards points for both LEED v2009 and v4.

Indoor Advantage™ - Furniture - An SCS indoor air quality certification for office furniture and seating that meets the requirements of ANSI/BIFMA M7.1-2011, ANSI/BIFMA X7.1-2011, and ANSI/BIFMA e-3-2012, credit 7.6.1. Certified products contribute towards points for both LEED v2009 and v4 for low-emitting materials.

Indoor Advantage™ Gold – Building Materials - An SCS indoor air quality certification for building products that meet the emission requirements of CDPH/EHLB Standard Method V1.1. Certified products may contribute towards points for both LEED v2009 and v4 for low-emitting materials.

Indoor Advantage™ Gold – Furniture - An SCS indoor air quality certification office furniture and seating that, at minimum, meets the emission requirements of Indoor Advantage – Furniture and ANSI/BIFMA e.3-2012, credit 7.6.2. Products may also meet ANSI/BIFMA e.3-2012, credit 7.6.3, and CDPH/EHLB Standard Method V1.1. Certified products contribute towards points for both LEED v2009 and v4 for low-emitting materials.

Manufacturer – Organization or individual responsible for the production of the product undergoing certification assessment.

Product Category – General group of similar products intended for a particular application and performance.

Quality Plan - A document setting out the specific quality practices, resources and sequence of activities implemented by the Manufacturer to ensure consistent compliance with the requirements of the indoor air quality certification program.

Representative Product Sample – A product sample that is representative of the product manufactured and produced under typical operation conditions.

Standard - State, National, or International Standard, Specification or other document against which certification is granted or which comprises part of a certification program.

SCS Certification Mark – SCS certification trademarks, which are used for on-product and off-product labelling. These include Indoor Advantage™ and Indoor Advantage™ Gold. The FloorScore name and logo are certification marks of the Resilient Floor Covering Institute (RFCI) and are protected in the US and internationally.

SCS Certification Labels - Labels incorporating the SCS Certification Mark.

Supplier - Organization that supplies a product or service to the Manufacturer.

Third Party - Person or body that is recognized as being independent of the parties involved, as concerns the issue in question.

Volatile Organic Compound (VOC) - Carbon-containing compound (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonates and ammonium carbonate) with vapor pressure at EPA-defined standard conditions approximately ranging between those for n-pentane through n-heptadecane. For the purposes of this standard, formaldehyde and acetaldehyde are also considered to be VOCs.

4.0 References

The following documents contain provisions that constitute the requirements of this Standard. At the time of final approval, the indicated editions were valid. All standards are subject to revision, thereby the certification program shall apply the most recent editions of the standards indicated below.

4.1 Normative References

- ANSI/BIFMA e.3-2012 Furniture Sustainability Standard; Credit 7.6 (includes 7.6.1, 7.6.2, and 7.6.3): Low Emitting Furniture
- ANSI/BIFMA M7.1-2011 Standard Test Method for Determining VOC Emissions From Office Furniture Systems, Components, and Seating
- ANSI/BIFMA X7.1-2011 Standard for Formaldehyde and TVOC Emissions of Low-emitting Office Furniture and Seating
- Canadian VOC Concentration Limits for Architectural Coatings, SOR/2009-264: April 16, 2014
- CDPH/EHLB/Standard Method V1.1, February 2010 Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions form Indoor Sources Using Environmental Chambers, Emission testing method for California Specification 01350
- European Directive Limiting the VOC Content in Certain Products, 2004/42/EC
- Hong Kong Air Pollution Control (VOC) Regulation
- ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories
- ISO/IEC 17065:2012 Conformity assessment – Requirements for bodies certifying products, processes and services
- U.S. Green Building Council, Leadership in Energy & Environmental Design, v2009
- U.S. Green Building Council, Leadership in Energy & Environmental Design, v4
- California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings
- South Coast Air Quality Management District (SCAQMD) Rule 1113 – Architectural Coatings, September 2013
- South Coast Air Quality Management District (SCAQMD) Rule 1168 – Adhesive and Sealant Applications, January 2005

4.2 Informative References

- California Criteria for High Performance Schools (CHPS) Best Practices Manual, Volume III, 2009
- Federal Trade Commission (FTC) 16 CFR Part 260:2012 - Guides for the Use of Environmental Marketing Claims; Final Rule ISO 9001:2008 Quality Management System Requirements
- ISO 14001:2004 Environmental Management System Requirements

- ISO/IEC 17011: 2004 Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies
- ISO/IEC 17021:2011 Conformity assessment – Requirements for bodies providing audit and certification of management systems
- ISO 19011:2011 Guidelines for auditing management systems

5.0 General Conditions

5.1 Confidentiality

All proprietary information, including specifications, quality plans, and test reports shall remain confidential between SCS and the Manufacturer unless the Manufacturer authorized the release or is otherwise compelled by law to release such information.

5.2 Changes to the Standard

(5.2.1) Proposals for the revision of SCS Standards and Guidelines shall be submitted to the Standards Review Committee. The Committee Chair shall determine whether or not a formal review of the Standard is necessary, outside of the five-year review schedule. Should it be deemed necessary, the Standards Review Committee will convene and proceed with the Internal Review Process, then determine whether and what portions of the Technical and Stakeholder Review proceedings may be necessary. If the full Stakeholder and Technical Review Processes do not ensue, justification shall be provided and documented by the Standards Review Committee.

(5.2.2) If this Standard is amended or re-issued, a transition period for conformance to the revised and applicable certification program will be determined by SCS, usually in consultation with relevant technical and stakeholder reviewers.

(5.2.3) A client notification will be sent within thirty days of the approved changes notifying clients of the standard changes, transition period, and actions necessary to comply with the standard.

(5.2.4) After the transition period, the Manufacturer shall not apply the SCS Certification Mark to any product covered by the certification program until the product has been evaluated by SCS and determined compliant.

5.3 Notification

SCS shall be notified by the client of any proposed change(s) in its operation that could adversely affect the conformity of the product or process to the certification program. Such changes shall not be implemented without written authorization from SCS. In particular, SCS shall be notified of design, material or production changes that could impact the indoor air quality emissions profile of the certified product.

5.4 Use of Labels and Marks

(5.4.1) SCS issues program certification once satisfied that the Manufacturer has demonstrated that current production operations are capable of consistently producing a product that complies with this product Standard. The Manufacturer may apply the SCS Certification Mark to compliant product, thereby warranting that the product meets all relevant requirements of the specified program.

(5.4.2) All necessary action shall be taken to ensure that the SCS Certification Mark is not associated with products that do not comply with the certification program requirements. Product found to be non-conforming with an SCS Certification Mark may be suspended by SCS pending investigation and corrective action.

(5.4.3) Manufacturers who use the registered certification trademarks of SCS do so on certain terms and under the rules described in the *SCS Assessment Services Agreement* and *Labeling and Language Guide*[1].

(5.4.4) All uses of the SCS Certification Label or references to the certification on the product and in product advertising shall be conducted in conformance with U.S. Federal Trade Commission guidelines or other national guidelines if outside of the U.S.

(5.4.5) At the discretion of the certification program, requirements may be updated and will do so in accordance with *Section 5.2 – Changes to the Standard of EC10.3-2014*.

6.0 General Product Certification Requirements

Manufacturers seeking Indoor Air Quality product certification shall comply at minimum with the following general requirements. Each certification program, as outlined in *Section 1.1 – Purpose,* has specific program certification requirements and is detailed in the normative *Appendices* of this Standard.

6.1 Product Compliance

Adequate supervision and control shall be exercised at all stages of manufacturing to ensure that the finished product, together with the related marking and information, meets all the relevant requirements of this Standard.

6.2 Representative Sample Selection

(6.2.1) General compliance to sample selection shall adhere to the guidance within *CDPH/EHLB Standard Method V1.1, Section 8.7 and/or ANSI/BIMFA M7.1-2011, Section 9.1.*

(6.2.2) Samples selected for compliance testing shall represent the product or product grouping with the highest VOC emission potential, otherwise considered the worst-case representative product.

[1] This document is provided as a supplement to the SCS Assessment Services Agreement and is available upon request.

(6.2.3) Evidence justifying the product is representative shall be clearly documented as described in *Section 8.3* of *CDPH/EHLB Standard Method V1.1.*

(6.2.4) Samples selected for testing shall be representative of the product manufactured and produced under typical operations.

6.3 Laboratory Qualifications

(6.3.1) Laboratories used shall be independent entities with no direct connection to the manufacturer or otherwise be a potential conflict of interest with respect to the manufacturer.

(6.3.2) Laboratories shall be accredited to *ISO/IEC 17025:2005 - General requirements for the competence of testing and calibration laboratories* and shall have the test methods identified within this Standard listed in the scope of their accreditation.

(6.3.3) Laboratories shall adhere to the guidance within *CDPH/EHLB Standard Method V1.1, Section 5 and/or ANSI/BIMFA M7.1-2011, Section 10.*

6.3.4. Laboratories used for ongoing Indoor Air Quality certification shall be an SCS approved laboratory.

6.4 Determining VOC Emission and VOC Content Compliance

(6.4.1) Compliance of products to the applicable standards shall be calculated using the basic principles of IAQ modeling. Product compliance shall be determined by comparing the calculated emission concentration or emission factor to the applicable VOC emission criteria by using a steady-state, mass-balance model and standardized building scenario inputs..

(6.4.2) Applicable product type modeling parameters and targeted VOC emission criteria specified in *CDPH/EHLB Standard Method V1-1, Sections 4 and 7*; and/or *ANSI/BIFMA M7.1-2011, Sections 11 and Appendix 1* shall be used

(6.4.3) Compliance of Architectural Coatings, Adhesives, and Sealants to applicable VOC content requirements shall adhere to the program specific certification requirements in the Appendices of this Standard.

6.5 Quality Control Requirements

(6.5.1) The manufacturer shall have a documented quality control (QC) plan for the production of the selected building product. This QC plan shall provide for adequate supervision and control to be exercised at all stages and locations of the manufacturing operation so that the finished product is consistently produced.

(6.5.2) The manufacturer shall incorporate the following documents, information, and procedures into their quality management system:

- Production Flow Description;
- Disclosure of Production Variability (if any);

- Product Identification and Traceability Procedure;
- Control of Non-conforming Products Procedure; and
- Corrective and Preventive Action Procedure.

6.6 On-Site Audits

(6.6.1) On-site audits of the manufacturing operation shall be conducted by an SCS employee or SCS designated representative as part of the certification assessment.

(6.6.2) On-site audits and frequency are determined by the program specific requirements.

(6.6.3) On-site audits may focus on sample selection and the documented control system for the certified product including the mechanisms that the company has in place to ensure continuing compliance of the product.

(6.6.4) SCS retains the right to revisit the manufacturing facility at any time during which the product maintains certified product

6.7 Renewal Certification

(6.7.1) All Indoor Air Quality certifications are valid for a period of one (1) year. The certificate may be renewed annually for an additional one (1) year period upon successful completion of a renewal assessment.

(6.7.2) Product retesting, frequency and determination of continued compliance shall adhere to the general guidance within *CDPH/EHLB Standard Method V1.1, Section 8.8; and/or ANSI/BIMFA X7.1-2011, Section 6 and ANSI/BIFMA M7.-2011, Section 12.*

6.8 Modeling Parameters for Unspecified Products

(6.8.1) Products for which the modeling parameters on standard applications are not specified, the product loading shall be determined based on (a) the surface area of the system in the selected standard environment where the product is applied, and (b) the product's standard application specifications.

(6.8.2) Data and product information used to establish the loading shall be made part of the test report record and made available through the certification report if the modeling parameters are defined by SCS and in accordance to the guidance within *CDPH/EHLB Standard Method V1-1, Sections 4.3.6 and 6.1.4*.

6.9 Certification Documentation

All Indoor Air Quality certification programs shall, at minimum, provide the client with the following information on both the final certificate and final report:

- Name and address of the client;
- Scope of products certified;
- Standards and/or normative documents used to which conformity is being certified;

- Statement of exposure scenario of applicable standards used to determine compliance;
- Date certification is granted;
- Certification expiry date.

7.0 Eligibility and Conditions for Privately Labeled Products

7.1. Eligibility

(7.1.1) An Indoor Air Quality certified product which is re-branded or privately labeled by another company shall be eligible to benefit from the SCS Private Label Certification Program.

7.2 Conditions for Use of Certification Label

(7.2.1) Re-branded or privately labeled product shall be identical in its components, materials, formulations, and manufacturing processes as the Indoor Air Quality certified product and shall not be altered by either manufacturer or purchasing company.

(7.2.2) The supplier company who manufactures the certified product shall only offer Private Labels for Indoor Air Quality certified products in accordance with *EC10.3-2014, Section 5.4 - Use of Labels and Marks*[2].

(7.2.3) Purchasers of certified products may apply directly for a Private Label certification through SCS. Private Label certification shall operate in accordance with *EC10.3-2014, Section 5.4 - Use of Labels and Marks*[3].

8.0 Complaints, Appeals, and Disputes

All complaints, appeals and disputes are handled in accordance with the *SCS Complaint, Appeals and Disputes Procedure*.[4] Complaints may also be submitted directly through the SCS website, http://www.scsglobalservices.com/your-feedback.

[2] Private Label applications may be downloaded from the SCS website: http://www.scsglobalservices.com or requested directly from the SCS certification program.
[3] Ibid.
[4] This document is provided as a supplement to the SCS Assessment Services Agreement and is available on the SCS website at: http://www.scsglobalservices.com/your-feedback.

Appendix

The following normative appendices detail the SCS Indoor Air Quality product certification program requirements:

- Appendix 1. FloorScore® Certification Requirements;
- Appendix 2. Indoor Advantage™ Gold – Building Materials Certification Requirements;
- Appendix 3. Indoor Advantage™ & Indoor Advantage Gold – Furniture Certification Requirements.

Appendix 1. FloorScore® Certification Requirements

The FloorScore certification applies to RFCI approved flooring products. Approved product categories include, Flooring Adhesives, Bamboo Flooring, Ceramic Flooring, Engineered Hardwood Flooring, Laminate Flooring, Linoleum Flooring, Polymeric Flooring, Porcelain Flooring, Raised Flooring, Rubber Flooring, Solid Hardwood Flooring, Sheet Vinyl Flooring, Vinyl Composition Tile (VCT) Flooring, Vinyl Tile Flooring, Wall Bases (all material types), and Flooring Accessories (e.g. underlayments, nosings, stair treads, etc).

A1.1 Product Compliance

FloorScore certified products shall comply with the VOC emissions criteria of CDPH/EHLB Standard Method V1.1 for both the private office and school classroom scenarios; and the Quality Control requirements listed within this standard.

Additional VOC content requirements for flooring adhesives applied on-site are described in the USGBC LEED v4 criteria for low-emitting materials and *Section A2.1.1* of this Standard. These are not required until January 1, 2015 or unless otherwise required by RFCI.

Standard scenario parameters and product type quantities shall be used as detailed in *Tables 4-2, 4-3, 4-4, and 4-5 of the CDPH/EHLB Standard Method V1.1*.

A1.2 On-site Audits

All manufacturing sites within the scope of certification require an on-site audit, which must be completed within the first four years of certification.

Manufacturing sites shall be re-evaluated at a minimum of every fourth year of certification to determine if a renewal on-site audit is required. A renewal on-site audit may be required for any one of the following reasons:

- Major changes in the manufacturing process;
- Major changes in scope of product certification,
- Systemic non-conformances in a product's emission profile;
- Systemic non-conformances identified in the Quality Management System; or
- Systemic non-conformances identified in production.

A1.3 Renewal Certification

Renewal testing to determine continued compliance is required at a frequency of at least biennially (once every two years), unless products are known non-emitting products (e.g. ceramics) or have an established emission history of undetected VOCs, in which case emission testing occurs every fourth year of certification.

Products that have had a change in ingredients, formulation, production process, quality management system, suppliers, or other potential increase in its emission profile shall be assessed for additional testing needs.

A1.4 FloorScore® Conformance Criteria

Products that meet FloorScore certification have met the following criteria:

Product Categories	Minimum Criteria Met	Additional Criteria or Claims That May be Met
All Flooring Types	CDPH/EHLB Standard Method V1.1, Private Office and School Classroom	
Adhesive	CDPH/EHLB Standard Method V1.1, Private Office and School Classroom	▪ USGBC LEED v2009 ▪ USGBC LEED v4 ▪ SCAQMD Rule 1168, January, 2005 ▪ Hong Kong Air Pollution Control (VOC) Regulation ▪ Excludes addition of Methylene Chloride and Perchloroethylene.

Appendix 2. Indoor Advantage™ Gold – Building Materials Certification Requirements

The Indoor Advantage Gold – Building Materials certification applies to interior building and construction products. Approved product categories include: Adhesives, Ceiling Tiles, Doors, Sealants, Thermal Insulation, Coatings/Paints, Wall Coverings, Architectural Panels, Windows, and Window Treatments.

A2.1 Product Compliance

The Indoor Advantage Gold – Building Materials certified products shall comply with the VOC emissions criteria of CDPH/EHLB Standard Method V1.1 for the private office and school classroom scenarios; and the Quality Control requirements listed within this standard.

Additional requirements for architectural coatings, adhesives, and sealants are described below. These additional requirements meet the criteria of USGBC LEED v4 for low-emitting materials. Demonstration of conformance to LEED v4 criteria is optional until December 31, 2014. In the interim, conformance to LEED v2009 for low-emitting materials shall continue to meet the certification requirements. Conformance to LEED v4 criteria is required beginning January 1, 2015.

Compliance criteria met shall be communicated through the certificate, publically available document or online registry.

A2.1.1 Additional Requirements for Adhesives and Sealants

For the purposes of this section, the term "project" is used to describe where products are applied and intended for use in a building plan (e.g. LEED, CHPS, etc.). Governing and applicable VOC content rules shall be applied based on the location of the building project.

The market location where products are intended for use shall comply with the governing and applicable VOC content rules.

All adhesives and sealants, wet-applied on-site, shall meet the applicable chemical content requirements of SCAQMD Rule 1168, July 1, 2005, Adhesive and Sealant Applications, as analyzed by the methods specified in Rule 1168.

The provisions of SCAQMD Rule 1168 do not apply to adhesives and sealants subject to state or federal consumer product VOC regulations.

For projects outside the U.S., adhesives and sealants shall meet the technical requirements of the above regulations, or comply with applicable national VOC control regulations. See Table A2 for the applicable regulations.

Intentionally added exempt compounds larger than 1% weight by mass (total exempt compounds) shall be disclosed, if the applicable regulation requires subtraction of exempt compounds.

No compounds present in the adhesive at more than 1% of the total mass of the adhesive shall be a carcinogen or reproductive toxicant as defined as Chemicals of Concern is Section 4.1.2 of CDPH/EHLB Standard Method V1.1.

For projects in North America, methylene chloride and perchloroethylene may not be intentionally added.

Claims of compliance for adhesive and sealants must state the amount applied in mass per surface area.

A2.1.2 Additional Requirements for Architectural Coatings and Paints

For the purposes of this section, the term "project" is used to describe where products are applied and intended for use in a building plan (e.g. LEED, CHPS, etc.). Governing and applicable VOC content rules shall be applied based on the location of the building project.

The market location where products are intended for use shall comply with the governing and applicable VOC content rules.

All architectural coatings and paints wet-applied on site must meet the applicable VOC limits of the California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011. See Table A2 for the applicable regulations.

For projects outside the U.S., architectural coatings and paints shall meet the technical requirements of the above regulations, or comply with applicable national VOC control regulations. See Table A2 for the applicable regulations.

Intentionally added exempt compounds larger than 1% weight by mass (total exempt compounds) shall be disclosed, if the applicable regulation requires subtraction of exempt compounds.

No compounds present in the adhesive at more than 1% of the total mass of the adhesive shall be a carcinogen or reproductive toxicant as defined as Chemicals of Concern is Section 4.1.2 of CDPH/EHLB Standard Method V1.1.

For projects in North America, methylene chloride and perchloroethylene may not be intentionally added.

Claims of compliance for architectural coatings and paints must state the amount applied in mass per surface area.

Table A2. Governing VOC Content Requirements

Product Type	United States	Canada	China	Europe
Adhesive/ Sealant	(SCAQMD) Rule 1168, July 1, 2005.	N/A	Hong Kong Air Pollution Control (VOC) Regulation	N/A
Architectural Coatings/ Paints	▪ CARB 2007, Suggested Control Measure for Architectural Coatings ▪ SCAQMD Rule 1113, September 2013.	Canadian VOC Concentration Limits for Architectural Coatings	Hong Kong Air Pollution Control (VOC) Regulation	European Decopaint Directive (2004/42/EC)

A2.1.3 Additional Requirements for Thermal and Acoustic Insulation

For the purposes of this section, the term "project" is used to describe where products are applied and intended for use in a building plan (e.g. LEED, CHPS, etc.).

At minimum, batt insulation products may contain no added formaldehyde, including urea formaldehyde, phenol formaldehyde, and urea-extended phenol formaldehyde.

A2.2 On-site Audits

All manufacturing sites within the scope of certification require an on-site audit, which must be completed within the first four years of certification.

Manufacturing sites shall be re-evaluated at a minimum of every fourth year of certification to determine if a renewal on-site audit is required. A renewal on-site audit may be required for any one of the following reasons:

- Major changes in the manufacturing process;
- Major changes in scope of product certification,
- Systemic non-conformances in a product's emission profile;
- Systemic non-conformances identified in the Quality Management System; or
- Systemic non-conformances identified in production.

A2.3 Renewal Certification

Renewal testing to determine continued compliance is required at a frequency of at least biennially, unless products are known non-emitting products (e.g. ceramics) or have an established emission history of undetected VOCs, in which case emission testing occurs every fourth year of certification.

Products that have had a change in ingredients, formulation, production process, quality management system, suppliers, or other potential increase in emission profile shall be assessed for additional testing needs.

A2.4 Indoor Advantage™ Gold – Building Materials Conformance Criteria

Products that meet Indoor Advantage Gold – Building Materials certification have met the following criteria:

Product Categories	Minimum Criteria Met[5]	Additional Criteria or Claims That May be Met
Adhesive/Sealants	CDPH/EHLB Standard Method V1.1, School Classroom	▪ CDPH/EHLB Standard Method V1.1, Private Office ▪ CDPH/EHLB Standard Method V1.1, Single-Family Residence ▪ SCAQMD Rule 1168, January 2005 ▪ Hong Kong Air Pollution Control (VOC) Regulation ▪ Excludes addition of Methylene Chloride and Perchloroethylene.
Architectural Coatings/Paints	CDPH/EHLB Standard Method V1.1, School Classroom	▪ CDPH/EHLB Standard Method V1.1, Private Office ▪ CDPH/EHLB Standard Method V1.1, Single-Family Residence ▪ SCAQMD Rule 1113, September 2014 ▪ European Decopaint Directive (2004/42/EC) ▪ Hong Kong Air Pollution Control (VOC) Regulation ▪ Canadian VOC Concentration Limits for Architectural Coatings ▪ Excludes addition of Methylene Chloride and Perchloroethylene.
All Other Building Materials	CDPH/EHLB Standard Method V1.1, School Classroom	▪ CDPH/EHLB Standard Method V1.1, Private Office ▪ CDPH/EHLB Standard Method V1.1, Single-Family Residence ▪ California Air Resources Board ATCM for Formaldehyde Requirements for ULEF resins or no added formaldehyde resins.

[5] If no product type parameter or applicable scenario exists, the default scenario shall be the private office scenario.

Appendix 3. Indoor Advantage™ & Indoor Advantage Gold – Furniture Certification Requirements

The Indoor Advantage – Furniture certification applies to interior office furniture products. Approved product categories include: Seating (e.g. Executive, School Classroom), Systems Furniture (e.g. Benching, Panel, Desking), Casegoods (e.g. Desks, Files, Storage), Tables (e.g. Classroom, Conference, Occasional).

A3.1 Product Compliance

The Indoor Advantage™ – Furniture certification program is based on the emissions criteria of ANSI/BIFMA X7.1-2011, ANSI/BIFMA e.3-2012, Furniture Sustainability Standard, Section7.6.1, the test methods of ANSI/BIFMA M7.1-2011 and the manufacturing requirements listed within this standard.

IAQ concentration modeling shall be completed to assess conformance to ANSI/BIFMA X7.1-2011 using the prescribed standardized scenario for seating in ANSI/BIFMA M7.1-2011, Section 11.3.

The Indoor Advantage™ Gold– Furniture certification program is based on the emissions criteria of ANSI/BIFMA X7.1-2011, ANSI/BIFMA e.3-2012, Furniture Sustainability Standard, Sections 7.6.1, 7.6.2, 7.6.3, and CDPH/EHLB Standard Method V1.1, Section 7. Additionally, product testing must comply with the test methods of ANSI/BIFMA M7.1-2011 and the manufacturing requirements listed within this standard.

IAQ concentration and emission factor modeling shall be completed to assess conformance to ANSI/BIFMA X7.1-2011 and CDPH/EHLB Standard Method v1.1, Section 7.2. The modeling completed shall use the prescribed standardized scenarios for the private office workstation and open plan workstation for an individual furniture component or workstation system in ANSI/BIFMA M7.1-2011, Section 11.3. Classroom furniture shall be modeled in conformance to CDPH/EHLB, Sections 4.3.4 and 7.2.

A3.2 On-site Audits

On-site audits shall be conducted when the manufacturing sites are located outside the United States and have not attained a third-party quality management system certification, e.g. ISO 9001 or 14001.

Manufacturing sites shall be re-evaluated at a minimum of every fourth year of certification to determine if a renewal on-site audit is required. A renewal on-site audit may be required for any one of the following reasons:

- Major changes in the manufacturing process;
- Major changes in scope of product certification,
- Systemic non-conformances in a product's emission profile;
- Systemic non-conformances identified in the Quality Management System; or
- Systemic non-conformances identified in production.

A3.3 Renewal Certification

Compliance emission tests are considered valid as long as the production process, materials, and components remain the same to ensure the product emission profile remains consistent.

Renewal compliance testing is required at a frequency of at least every three years.
Products that have had a change in ingredients, formulation, production process, quality management system, suppliers, or other potential increase in emission profile shall be assessed for additional testing needs.

Renewal on-site audits are not required, unless significant changes have occurred in the manufacturing process, significant change in scope of product certification, significant changes or major non-conformances in product emissions, or major non-conformances in quality management system. Reassessment to require an on-site audit will occur at minimum every fourth year of certification.

A3.4 Indoor Advantage™ – Furniture Conformance Criteria

Products that meet Indoor Advantage – Furniture certification have met the following criteria:

Product Categories	Minimum Criteria Met	Additional Criteria or Claims That May be Met
Seating	▪ ANSI/BIFMA X7.1/M7.1-2011, Seating ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Seating	▪ ANSI/BIFMA e.3-2012, Credit 7.6.3, Seating
Systems Furniture/ Casegoods	▪ ANSI/BIFMA X7.1/M7.1-2011, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Private Office	▪ ANSI/BIFMA X7.1/M7.1-2011, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.3, Private Office
All Other Individual Furniture Components	▪ ANSI/BIFMA X7.1/M7.1-2011, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Private Office	▪ ANSI/BIFMA X7.1/M7.1-2011, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.3, Private Office

A3.5 Indoor Advantage™ Gold – Furniture Conformance Criteria

Products that meet Indoor Advantage Gold – Furniture certification have met the following criteria:

Product Categories	Minimum Criteria Met	Additional Criteria or Claims That May be Met
Office Seating	▪ ANSI/BIFMA X7.1/M7.1-2011, Seating ▪ ANSI/BIFMA e.3-2012, Credit	▪ ANSI/BIFMA e.3-2012, Credit 7.6.3, Seating ▪ CDPH/EHLB Standard Method

	7.6.1, Seating ▪ ANSI/BIFMA e.3-2012, Credit 7.6.2, Seating	V1.1, School Classroom ▪ CDPH/EHLB Standard Method V1.1, Seating
School Classroom Seating	▪ CDPH/EHLB Standard Method V1.1, School Classroom	▪ ANSI/BIFMA X7.1/M7.1-2011, Seating ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Seating ▪ ANSI/BIFMA e.3-2012, Credit 7.6.2, Seating ▪ ANSI/BIFMA e.3-2012, Credit 7.6.3, Seating ▪ CDPH/EHLB Standard Method V1.1, Seating
Systems Furniture/Casegoods	▪ ANSI/BIFMA X7.1/M7.1-2011, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.2, Private Office	▪ ANSI/BIFMA X7.1/M7.1-2011, Open Plan ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Open Plan ▪ ANSI/BIFMA e.3-2012, Credit 7.6.2, Open Plan ▪ ANSI/BIFMA e.3-2012, Credit 7.6.3, Private Office, Open Plan
All Other Individual Office Furniture Components	▪ ANSI/BIFMA X7.1/M7.1-2011, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.2, Private Office	▪ ANSI/BIFMA X7.1/M7.1-2011, Open Plan ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Open Plan ▪ ANSI/BIFMA e.3-2012, Credit 7.6.2, Open Plan ▪ ANSI/BIFMA e.3-2012, Credit 7.6.3, Private Office, Open Plan ▪ CDPH/EHLB Standard Method V1.1, Open Plan ▪ CDPH/EHLB Standard Method V1.1, School Classroom
School Classroom Furniture	▪ CDPH/EHLB Standard Method V1.1, School Classroom	▪ ANSI/BIFMA X7.1/M7.1-2011, Open Plan, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.1, Open Plan, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.2, Open Plan, Private Office ▪ ANSI/BIFMA e.3-2012, Credit 7.6.3, Open Plan, Private Office ▪ CDPH/EHLB Standard Method V1.1, Open Plan
Fabrics/Upholstery	▪ CDPH/EHLB Standard Method V1.1, School Classroom	