

Low Emitting Materials

LEED v4 Requirements

This credit covers volatile organic compound (VOC) emissions into indoor air and the VOC content of materials, as well as the testing methods by which indoor VOC emissions are determined. Different materials must meet different requirements to be considered compliant for this credit.

The building interior is defined as everything within the waterproofing membrane.



General Emissions Evaluation

Building products must be tested and determined compliant in accordance with California Department of Public Health (CDPH) Standard Method v1.1-2010, using the applicable exposure scenario. Manufacturers' claims of compliance must also state the range of total VOCs after 14 days. SCS Indoor Advantage Gold, UL Greenguard Gold, and MAS Certified Green meet the General Emissions Evaluation.

VOC content requirements for wet-applied products

On-site wet-applied products must meet the following requirements:

- All paints and coatings - SCAQMD Rule 1113, effective June 3, 2011 OR CARB 2007 SCM
- All adhesives and sealants - SCAQMD Rule 1168, effective July 1, 2005

Material Categories

Interior paints and coatings applied on-site

Requires General Emissions Evaluation for paints and coatings applied to walls, floors, and ceilings AND VOC content requirements for wet-applied products. Obtain manufacturer documentation confirming compliance with both requirements. Shop-applied paints and coatings are excluded. MSDS Sheet may confirm VOC content. Look for SCS Indoor Advantage Gold, UL Greenguard Gold, and MAS Certified Green to meet General Emissions Evaluation.

Threshold: At least 90%, by volume, for emissions; 100% for VOC content



Interior adhesives and sealants applied on-site (including flooring adhesive)

Requires General Emissions Evaluation AND VOC content requirements for wet-applied products. MSDS Sheet may confirm VOC content. Look for SCS Indoor Advantage Gold, UL Greenguard Gold, and MAS Certified Green to meet General Emissions Evaluation.

Threshold: At least 90%, by volume, for emissions; 100% for VOC content



Flooring

Requires General Emissions Evaluation. Look for Green Label Plus for carpet, FloorScore for hard surface, and NSF/ANSI 332 for resilient flooring.

Threshold: 100%, by quantity



Composite Wood

Requires Composite Wood Evaluation. Must be documented to have low formaldehyde emissions that meet the California Air Resources Board ATCM for formaldehyde requirements for ultra-low-emitting formaldehyde (ULEF) resins or no added formaldehyde resins. Look for CARB ULEF label, CARB exempt, or NAF.

Threshold: 100%, by quantity



Ceilings, walls, thermal, and acoustic insulation

Requires General Emissions Evaluation. For Healthcare and Schools only: batt insulation products may not contain added formaldehyde, including urea formaldehyde, phenol formaldehyde, and urea-extended phenol formaldehyde. Look for SCS Indoor Advantage Gold, UL Greenguard Gold, and MAS Certified Green.

Threshold: 100%, by quantity



Healthcare and Schools Projects only: Exterior applied products

Adhesives, sealants, coatings, roofing, and waterproofing materials applied on site must meet the VOC limits of CARB 2007 Suggested Control Measure (SCM) for Architectural Coatings, and South Coast Air Quality Management District (SCAQMD), Rule 1168, effective July 1, 2005. The following do not count toward compliance: hot-mopped asphalt for roofing, and coal tar sealants for parking lots and other paved surfaces.

Threshold: at least 90% by volume

Resources

productguide.ulenvironment.com/QuickSearch.aspx **Greenguard**
www.scsglobalservices.com/certified-green-products-guide **Floorscore, Indoor Advantage**
www.mascertifiedgreen.com/certified_products.asp **MAS Certified Green**
www.carpet-rug.org/green-label-plus.html **Green Label Plus**
<http://www.intertek.com/furniture/etl-environmental-voc-certified/> **Intertek**
<https://www.arb.ca.gov/coatings/arch/docs.htm> **for Paints and Coatings-CARB 2007 SCM**
<http://www.usgbc.org/resources/low-emitting-materials-calculator> **LEED Calculator**
www.chpsregistry.com/live/public **CHPS first party self-certified claims are acceptable**
<https://www.arb.ca.gov/toxics/compwood/listoftpcs.htm> **Third Party Certifiers-Composite Wood**
<http://www.usgbc.org/credits> **LEED Credit Library**

Furniture

Requires Furniture Evaluation. New furniture must be tested in accordance with ANSI/BIFMA Standard Method M7.1-2011. Comply with ANSI/BIFMA e3-2011 Furniture Sustainability Standard, Sections 7.6.1 and 7.6.2, using either the concentration modeling approach or the emissions factor approach. Model the test results using the open plan, private office, or seating scenario in ANSI/BIFMA M7.1, as appropriate. For classroom furniture, use the standard school classroom model in CDPH Standard Method v1.1.

Look for SCS Indoor Advantage, SCS Indoor Advantage Gold, UL Greenguard Certified, UL Greenguard Gold, MAS certified green, Intertek ETL Environmental VOC, or BIFMA level (if 7.6.1 and/or 7.6.2 were achieved).

Threshold: at least 90% by cost



Exception

Inherently non-emitting sources: Products that are inherently non-emitting sources of VOCs (stone, ceramic, powder-coated metals, plated or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood flooring) are considered fully compliant without any VOC emissions testing if they do not include integral organic-based surface coatings, binders, or sealants.